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BULLETIN OF BUSINESS RESEARCH

STATISTICAL SUMMARY

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Business Conditions in Ohio and the United States

ITEM	OHIO						UNITED STATES					
				CHANGE FROM						CHANGE FROM		
				Last Month	Last Year					Last Month	Last Year	
	Unit or Index Base Period	Aug. 1979 (p)	July 1979 (r)	Aug. 1979 from July 1979	Aug. 1979 from Aug. 1978	8 months 1979 from 1978	Unit or Index Base Period	Aug. 1979 (p)	July 1979 (r)	Aug. 1979 from July 1979	Aug. 1979 from Aug. 1978	8 months 1979 from 1978
GENERAL BUSINESS				%	%	%				%	%	%
• Bank Debits[5, 11]	1967[f]	n.a.	n.a.	n.a.	n.a.	n.a.	Bil. $ Ex. NY[4, h]	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Number[12]	Number	n.a.	n.a.	n.a.	n.a.	n.a.	Number	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Liabilities[12]	Thous. Dol.	n.a.	n.a.	n.a.	n.a.	n.a.	Thous. Dol.	n.a.	n.a.	n.a.	n.a.	n.a.
Life Insurance Sales[6]	1967	320	296	+ 8	+ 15	+ 20	1967	348	329	+ 1	+ 1	+ 1
INCOME												
• Total Personal Income[1, 13]	Mil. Dol.[4, h]	94,192	93,952	+ x	+ 10	+ 12	Bil. Dol.[4, h]	1,947	1,932	+ 1	+ 12	+ 12
Salaries & Wages Income[7, 13]	Mil. Dol.[4, h]	c	c	— 2	+ 3	+ 7	Bil. Dol.[4, h]	1,237	1,230	+ 1	+ 11	+ 12
Nonagricultural Income[13]		b	b	b	b	b	Bil. Dol.[4, h]	1,897	1,882	+ 1	+ 11	+ 12
Employee Earn.—Gross Wkly.: Mfgr.[14, 15]	Dollars	318.65	324.66	— 2	+ 4	+ 7	Dollars	267.20	268.40	— x	+ 7	+ 8
" " Const.[14, 15]	Dollars	441.21	434.72	+ 2	+ 7	+ 7	Dollars	353.95	347.97	+ 1	+ 7	+ 8
Agr. Income (Cash Mktgs.)[16, 17]	1957–59	n.a.	n.a.	n.a.	n.a.	n.a.	1967	269	267	+ 1	+ 6	+ 22
EMPLOYMENT & UNEMPLOYMENT												
Civilian Labor Force[14, 15]	Thousands	5,155	5,107	+ 1	+ 3	+ 4	Thousands	104,363	104,995	— 1	+ 2	+ 3
Civilian Employment[14, 15]	Thousands	4,800	4,769	+ 1	+ 1	+ 3	Thousands	98,226	98,891	— 1	+ 2	+ 3
Nonagricultural Employment[14, 15]	Thousands	4,471	4,497	— 1	+ 2	+ 3	Thousands	94,431	95,034	— 1	+ 2	+ 3
Mfg. Prod. Employment[7, 15]	1967	77	79	— 3	— 5	— x	1967	104	103	+ x	+ 1	+ 3
• Mfg. Prod. Payrolls[7, 15]	1967	170	178	— 5	— 1	+ 7	1967	242	242	— x	+ 8	+ 12
Average Weekly Hours—Mfg. Prod.[7, 15]	Number	40.8	41.2	— 1	— 3	— 1	Number	40.0	40.0	+ x	— 1	— x
Unemployment, Total—No.[14, 15]	Thousands	354	338	+ 5	+ 36	+ 13	Thousands	6,137	6,104	+ 1	+ 4	— 3
Unemployment, Total—Rate[14, 15]	Percent	6.9	6.6				Percent	5.9	5.8			
Unemployment, Insured[14, 15]	Thousands	113	97	+ 16	+ 70	+ 15	Thousands	2,379	2,429	— 2	— 1	— 8
Registered for Work, O.B.E.S.[14]	Thousands	327	329	— x	+ 3	— 8		b	b	b	b	b
Unemployment Compensation Fund[14]	Mil. Dol.	593	532	+ 11	+ 39	+ 97		b	b	b	b	b
PRODUCTION												
Gross National Product (Quarterly)[13]		b	b	b	b	b	Bil. Dol.[4, h]	n.a.	n.a.	n.a.	n.a.	n.a.
Industrial Production[7, 11]	1967	c	c	— 4	— 8	— 1	1967[d]	152	153	— 1	+ 2	+ 6
• Steel Production[18]	Thous. Tons	1,800	1,790	+ 1	+ 2	+ 8	Thous. Tons	11,309	11,821	— 4	— 2	+ 5
Electric Power Production[8]	1967[f]	n.a.	n.a.	n.a.	n.a.	n.a.	Mil. KWH	n.a.	n.a.	n.a.	n.a.	n.a.
Bituminous Coal Production[19]	Thous. Tons	3,976	2,588	+ 54	— 17	+ 7	Thous. Tons	72,100	54,495	+ 32	+ 12	+ 26
Pig Iron Production[18]	Thous. Tons	1,217	1,239	— 2	+ 1	+ 6	Thous. Tons	7,351	7,799	— 6	— 2	+ 6
Machine Tools—Shipments[20]		b	b	b	b	b	Mil. Dol.	285.35	267.70	+ 7	+ 32	+ 26
Machine Tools—New Orders[20]		b	b	b	b	b	Mil. Dol.	426.05	362.10	+ 18	+ 14	+ 30
Durable Goods—New Orders[13]		b	b	b	b	b	Mil. Dol.[4]	74,385	72,476	+ 3	+ 5	+ 15
CONSTRUCTION (Value of Contracts)												
• Total (Seas. Adj.)[9, 21]	1967[d]						1967[d]					
Total[9, 21]	1967[f]	243	210	+ 16	— 11	+ 9	Mil. Dol.	14,472	14,715	— 2	— 10	+ 6
Residential Building[9, 21]	1967[f]	252	253	— 1	— 12	— 2	Mil. Dol.	7,069	7,008	+ 1	— 1	+ 4
Nonresidential Building[9, 21]	1967[f]	190	166	+ 15	— 18	+ 27	Mil. Dol.	4,515	4,510	+ x	+ 10	+ 14
Utilities and Non-Building Const.[9, 21]	1967[f]	361	219	+ 65	+ 9	+ 7	Mil. Dol.	2,889	3,198	— 10	— 40	+ 2
DISTRIBUTION												
Total Retail Sales[2, 13]	1957–59[d]	299	286	+ 4	+ 8	+ 6	Mil. Dol.[4]	74,621	72,370	+ 3	+ 11	+ 11
Department Store Sales[2, 13]	1957–59[d]	257	252	+ 2	+ 10	+ 7	Mil. Dol.[4]	7,294	7,162	+ 2	+ 9	+ 7
• New Passenger Cars Registered[3, 22]	1967	124	126	— 1	— 13	— 8	No.–49 sts.	877,157	912,711	— 4	— 17	— 5
New Trucks Registered[3, 22]	No.–41 cos.	6,189	5,927	+ 4	— 27	— 23	No.–47 sts.	285,607	289,455	— 1	— 28	— 11
Used Cars Registered[3]	No.–33 cos.	39,127	34,981	+ 12	— 9	— 8		b	b	b	b	b
PRICES												
• Consumer Price Index[15]:												
All Urban Consumers		b	b	b	b	b	1967	221	219	+ 1	+ 12	+ 11
Wage Earners & Clerical Workers		b	b	b	b	b	1967	222	219	+ 1	+ 12	+ 11
Producer Price Index[15]:												
All Commodities		b	b	b	b	b	1967	238	237	+ 1	+ 13	+ 11
Finished Goods		b	b	b	b	b	1967	217	216	+ 1	+ 11	+ 10
Intermediate Materials		b	b	b	b	b	1967	247	244	+ 1	+ 14	+ 11
Crude Materials		b	b	b	b	b	1967	282	287	— 2	+ 17	+ 18
Sensitive Indus. Commodities[15]		b	b	b	b	b	1967	298	297	+ x	+ 28	+ 29
BANKING AND FINANCE												
• Bank Loans, Large Banks—Total[11]	Mil. Dol.	22,497	25,173	— 11	n.a.	n.a.	Mil. Dol.	386,234	377,693	+ 2	n.a.	n.a.
" " " " Bus. & Agric.[11]	Mil. Dol.	8,180	8,861	— 8	n.a.	n.a.	Mil. Dol.	152,187	150,659	+ 1	n.a.	n.a.
Stock Price Index—400 Indust.[23]		b	b	b	b	b	1941–43 = 10	118.9	112.4	+ 6	+ 3	+ 7
" " " 40 Utils.[23]		b	b	b	b	b	1941–43 = 10	52.8	51.7	+ 2	— 1	— 3
" " " 20 Utils.[23]		b	b	b	b	b	1970 = 10	16.5	15.1	+ 9	+ 6	+ 4
Yield, Corp. AAA Bonds[23]		b	b	b	b	b	Percent	9.17	9.14	+ x	+ 5	+ 7

• Indicates series charted (page S-1). For sources and footnotes, see page S-3.

Business Conditions in the 8 Largest OHIO CITIES

ITEM	Uni[illegible] or Ind[illegible] Base Period	[illegible]	[illegible] (r)	CHANGE FROM LAST YEAR		Aug. 1979 (p)	July 1979 (r)	CHANGE FROM LAST YEAR		Aug. 1979 (p)	July 1979 (r)	CHANGE FROM LAST YEAR		Aug. 1979 (p)	July 1979 (r)	CHANGE FROM LAST YEAR	
				Aug. 1979 from Aug. 1978	8 months 1979 from 1978			Aug. 1979 from Aug. 1978	8 months 1979 from 1978			Aug. 1979 from Aug. 1978	8 months 1979 from 1978			Aug. 1979 from Aug. 1978	8 months 1979 from 1978
		AKRON				**CANTON**				**CINCINNATI**				**CLEVELAND**			
				%	%			%	%			%	%			%	%
Number Employed[7]:																	
Total[w]	1967	79	85	— 10	— 6	101	101	+ 4	+ 4	97	97	— 1	— 1	89	93	— 4	+ 1
Manufacturing	"	52	61	— 20	— 8	94	94	+ 8	+ 7	74	73	— 5	— 1	68	76	— 11	+ 1
Trade, Serv., & Utils.	"	113	115	— 3	— 4	115	116	+ 2	+ 1	120	122	+ x	— 3	110	110	+ x	+ x
Construction	"	75	72	— 2	+ 5	83	83	— 7	+ 2	92	90	+ 9	+ 26	90	89	+ 4	+ 2
Payrolls[7]:																	
Total[w]	"	162	171	— 5	+ 2	246	252	+ 11	+ 14	241	239	+ 6	+ 9	200	210	+ x	+ 8
• Manufacturing	"	106	120	— 17	— 3	219	232	+ 12	+ 18	186	173	— 3	+ 3	144	170	— 10	+ 10
Trade, Serv., & Utils.	"	264	266	+ 5	+ 5	322	309	+ 9	+ 8	313	327	+ 12	+ 12	269	257	+ 8	+ 7
Construction	"	180	167	+ 2	+ 10	188	201	+ 3	+ 6	232	223	+ 23	+ 44	237	240	+ 8	+ 9
Emp. Earn.—Gross Wkly.[7]:																	
All Industries[w]	$	310.06	298.67	+ 5	+ 7	317.86	326.59	+ 6	+ 9	286.53	279.93	+ 7	+ 11	344.12	348.38	+ 4	+ 8
Manufacturing	"	354.97	337.50	+ 3	+ 6	345.39	366.31	+ 4	+ 10	338.05	320.09	+ 3	+ 5	359.86	382.06	+ 1	+ 9
Trade, Serv., & Utils.	"	241.64	238.31	+ 9	+ 10	259.72	247.45	+ 9	+ 8	218.92	224.15	+ 13	+ 20	313.74	299.08	+ 7	+ 7
Construction	"	455.79	438.62	+ 3	+ 4	434.84	464.38	+ 5	+ 5	444.66	431.93	+ 13	+ 13	485.45	497.48	+ 3	+ 5
Retail Sales[2]	%	c	c	+ 10	+ 7	c	c	+ 7	+ 9	c	c	+ 8	+ 5	c	c	+ 13	+ 6
Auto Titles[3]:																	
New Cars	No.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5,388	5,314	— 8	— 10	7,900	8,603	— 23	— 11
New Trucks	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	828	734	— 17	— 15	1,074	1,013	— 24	— 12
Retail Food Prices[15]	1967	b	b	b	b	b	b	b	b	251	249	+ 10	+ 12	240	242	+ 7	+ 13
Bank Debits[5]	1967[f]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	No.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	Thous. $	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	1967[f]	149	151	— 6	+ 2	b	b	b	b	b	b	b	b	b	b	b	b
Value of Bldg. Const.[9]:																	
Total	"	174	185	— 14	+ 9	162	180	— 30	+ 20	165	150	+ 21	+ 36	87	117	— x	+ 11
Residential	"	226	209	— 28	— 17	207	214	— 19	+ 14	162	140	— 5	+ 34	97	91	+ 7	— 3
Nonresidential	"	122	161	+ 35	+ 71	106	138	— 47	+ 31	167	159	+ 58	+ 38	77	140	— 8	+ 24
Steel Production[18]	1967[g]	b	b	b	b	b	b	b	b	96	111	— 13	— 2	128	132	+ 14	+ 15
Labor Force Estimates[14]:																	
Civilian Labor Force	Thous.	244.8	244.8	+ 1	+ 2	175.0	174.3	+ 2	+ 4	442.1	437.2	+ 4	+ 2	760.3	758.1	+ x	+ 2
Civilian Employment	"	228.3	227.2	+ x	+ 2	165.0	163.1	+ 3	+ 4	414.8	411.4	+ 3	+ 2	717.3	714.2	— 1	+ 2
Unemp. Total—No.	"	16.5	17.6	+ 18	+ 9	10.0	11.2	+ 17	+ 7	27.3	25.7	+ 21	+ 7	42.9	43.9	+ 23	+ 9
Unemp., Total—Rate	%	6.7	7.2			5.7	6.4			6.2	5.9			5.6	5.8		
		COLUMBUS				**DAYTON**				**TOLEDO**				**YOUNGSTOWN**			
				%	%			%	%			%	%			%	%
Number Employed[7]:																	
Total[w]	1967	103	104	— 1	+ x	102	110	— 2	+ 3	102	99	— 1	+ x	86	86	+ 7	+ 1
Manufacturing	"	72	73	— 6	— 6	59	73	— 13	— x	82	75	— 9	— 4	59	58	+ 1	+ 1
Trade, Serv., & Utils.	"	125	127	+ x	+ 2	163	164	+ 4	+ 5	123	122	+ 4	+ 3	121	122	+ 12	+ 1
Construction	"	79	76	+ 10	+ 10	109	108	+ 4	+ 5	87	86	+ 2	+ 10	62	62	— 9	— 2
Payrolls[7]:																	
Total[w]	"	241	237	+ 4	+ 7	191	208	+ 1	+ 9	234	220	+ 1	+ 6	194	191	+ 20	+ 10
• Manufacturing	"	155	153	— 2	+ 3	120	154	— 12	+ 7	176	156	— 11	— 1	142	142	+ 11	+ 11
Trade, Serv., & Utils.	"	323	319	+ 6	+ 9	334	324	+ 12	+ 10	319	311	+ 11	+ 11	295	288	+ 28	+ 10
Construction	"	182	175	+ 18	+ 14	275	233	+ 20	+ 12	202	200	+ 6	+ 14	175	162	+ 15	+ 13
Emp. Earn.—Gross Wkly.[7]:																	
All Industries[w]	$	280.30	272.18	+ 7	+ 8	332.40	334.77	+ 5	+ 8	323.45	314.76	+ 4	+ 6	312.02	309.83	+ 14	+ 10
Manufacturing	"	333.89	323.62	+ 7	+ 11	360.03	377.02	+ x	+ 8	358.78	347.04	— x	+ 6	347.13	353.73	+ 11	+ 10
Trade, Serv., & Utils.	"	234.83	227.07	+ 8	+ 7	278.50	268.16	+ 11	+ 8	272.13	265.28	+ 9	+ 8	242.11	234.64	+ 17	+ 8
Construction	"	382.15	381.92	+ 7	+ 2	448.02	383.37	+ 16	+ 7	481.12	481.00	+ 4	+ 3	513.47	475.02	+ 25	+ 14
Retail Sales[2]	%	c	c	+ 5	+ 2	n.a.	n.a.	n.a.	n.a.	c	c	+ 5	+ 1	c	c	+ x	+ 4
Auto Titles[3]:																	
New Cars	No.	5,151	4,913	— 7	— 6	3,192	2,856	— 8	— 14	n.a.	n.a.	n.a.	n.a.	1,603	1,648	+ 1	— x
New Trucks	"	902	1,109	— 28	— 16	384	484	— 45	— 26	n.a.	n.a.	n.a.	n.a.	273	327	— 28	+ 3
Retail Food Prices[15]	1967	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
Bank Debits[5]	1967[f]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	No.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	Thous. $	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	1967[f]	b	b	b	b	b	b	b	b	151	157	— 8	+ 1	83	86	+ 11	+ 8
Value of Bldg. Const.[9]:																	
Total	"	317	164	+ 79	+ 40	142	189	+ 13	+ 31	151	100	+ 21	+ 66	245	358	— 46	— 4
Residential	"	202	176	+ 33	+ 24	186	176	+ 30	+ 40	274	203	+ 20	+ 7	173	265	— 59	— 18
Nonresidential	"	431	152	+113	+ 56	87	206	— 16	+ 22	85	45	+ 24	+155	328	467	— 32	+ 18
Steel Production[18]	1967[g]	b	b	b	b	b	b	b	b	b	b	b	b	89	78	— x	+ 5
Labor Force Estimates[14]:																	
Civilian Labor Force	Thous.	442.5	439.9	+ 4	+ 6	277.4	275.7	+ 5	+ 5	227.1	225.2	— 5	— 4	135.4	132.9	+ 4	+ 3
Civilian Employment	"	419.5	415.1	+ 3	+ 5	252.3	252.1	— x	+ 3	208.8	207.2	— 7	— 5	123.5	123.1	+ 3	+ 4
Unemp. Total—No.	"	23.0	24.8	+ 12	+ 10	25.1	23.5	+101	+ 48	18.3	18.0	+ 22	+ 4	11.9	9.8	+ 22	— 13
Unemp., Total—Rate	%	5.2	5.6			9.1	8.5			8.0	8.0			8.8	7.4		

NOTE: All data are for county areas except bank debits and commercial failures, which are for areas within city limits. The indexes of number employed and payrolls and the employee weekly earnings are based on data for production workers in manufacturing, construction workers in contract construction, and nonsupervisory employees in other categories which exclude agriculture, government, education, and public institutions.

• Indicates series charted (page S-3). For sources and footnotes, see page S-3.

Number Employed, Payrolls, and Man-Hours in Ohio Industry

INDUSTRIAL GROUP	NUMBER EMPLOYED[7]					PAYROLLS[7]					MAN-HOURS[7]				
	INDEX (1967 = 100)		CHANGE			INDEX (1967 = 100)		CHANGE			INDEX (1967 = 100)		CHANGE		
	Aug. 1979 (p)	July 1979 (r)	Aug. 1979 from July 1979	Aug. 1979 from Aug. 1978	8 months 1979 from 1978	Aug. 1979 (r)	July 1979 (p)	Aug. 1979 from July 1979	Aug. 1979 from Aug. 1978	8 months 1979 from 1978	Aug. 1979 (p)	July 1979 (r)	Aug. 1979 from July 1979	Aug. 1979 from Aug. 1978	8 months 1979 from 1978
			%	%	%			%	%	%			%	%	%
Total[w] (2,450)[a]	**89**	**91**	**— 2**	**— 2**	**+ x**	**195**	**199**	**— 2**	**+ 3**	**+ 8**	**88**	**89**	**— 2**	**— 3**	**+ x**
All Manufacturing[w] (1,334)	**77**	**79**	**— 3**	**— 5**	**— x**	**170**	**178**	**— 5**	**— 1**	**+ 7**	**71**	**74**	**— 4**	**— 8**	**— 1**
Chemicals (69)	100	100	+ x	+ 1	+ 1	217	212	+ 2	+ 6	+ 8	96	95	+ 1	— x	+ 1
Food Products (91)	84	78	+ 8	— 1	— 2	204	185	+ 10	+ 7	+ 4	77	70	+ 10	— 2	— 4
Bakery	77	78	— 1	— 2	— 5	177	180	— 2	+ 7	+ 3	72	75	— 4	— 3	— 5
Miscellaneous	85	78	+ 9	— 1	— 1	207	185	+ 12	+ 7	+ 4	77	69	+ 12	— 2	— 4
Lumber Products (47)	93	95	— 2	— 4	+ 1	182	178	+ 2	+ 5	+ 7	84	84	+ 1	— 2	— x
Furniture	100	103	— 3	— 4	— x	195	192	+ 2	+ 6	+ 5	96	96	— x	— 2	— 2
Miscellaneous	82	83	— 1	— 2	+ 6	164	160	+ 3	+ 5	+ 13	69	67	+ 2	— 2	+ 4
Machinery (310)	73	74	— 2	— 1	+ 1	153	156	— 2	+ 6	+ 9	68	70	— 3	— 3	+ x
Elec. Mach., Apparatus and Supplies	80	83	— 4	— 3	— 1	174	180	— 3	+ 2	+ 6	75	79	— 5	— 6	— 2
Machine Tools	64	64	— x	+ 10	+ 5	139	141	— 1	+ 21	+ 16	65	66	— 1	+ 10	+ 6
Agricultural Equipment	49	49	— x	+ 3	+ 6	107	105	+ 2	+ 12	+ 16	55	54	+ 2	+ 4	+ 6
Special Machinery and Appliances	68	67	+ 1	— 3	+ 1	136	135	+ x	+ 7	+ 10	63	63	— x	— 3	+ 1
Metal Products (360)	81	88	— 7	— 8	+ 1	181	202	— 10	— 5	+ 9	73	81	— 10	— 12	+ x
Foundry Products and Drop Forgings	78	99	— 22	— 25	— 2	177	241	— 27	— 29	+ 4	63	82	— 23	— 30	— 3
Pipes, Valves, and Plumbers' Supplies	84	88	— 5	+ 1	+ 15	203	207	— 2	+ 5	+ 18	94	97	— 3	— 3	+ 10
Screw Machine Products and Hdwe.	94	96	— 2	— 1	+ 4	168	175	— 4	— 9	+ 6	95	95	— 1	— 10	— 1
Sheet Metal Work	84	86	— 3	— 10	— 1	175	190	— 8	— 9	+ 1	70	73	— 4	— 14	— 6
Steel Works and Rolling Mills	78	82	— 5	— 3	+ 2	179	195	— 8	+ 5	+ 13	72	81	— 11	— 6	+ 3
Stoves and Furnaces	100	93	+ 7	— 16	— 3	197	167	+ 18	— 14	+ 5	105	92	+ 14	— 19	— 5
Miscellaneous	79	84	— 6	— 5	+ 1	170	187	— 9	— 2	+ 11	67	73	— 8	— 8	+ 2
Paper and Printing (147)	66	67	— x	— 3	— 2	164	163	+ 1	+ 2	+ 3	63	63	— 1	— 6	— 4
Paper and Pulp	50	49	+ 2	— 4	— 4	158	156	+ 1	— 1	+ 1	42	42	— 1	— 9	— 8
Printing and Publishing	80	80	+ x	— 1	— 2	180	176	+ 2	+ 8	+ 5	74	73	+ 2	+ 1	— 1
Miscellaneous	66	67	— 1	— 4	— 2	155	156	— x	+ 1	+ 3	67	68	— 1	— 6	— 3
Rubber Products (55)	62	72	— 14	— 15	— 5	140	167	— 16	— 11	+ 5	57	64	— 12	— 16	— 4
Tires and Tubes	50	52	— 3	— 6	— 8	104	103	+ x	— 4	+ 2	37	37	— x	— 10	— 7
Miscellaneous	69	84	— 18	— 19	— 3	166	219	— 24	— 16	+ 7	73	88	— 17	— 19	— 3
Stone, Clay, and Glass Products (95)	76	74	+ 2	— 4	— 4	176	178	— 1	— 1	+ 2	81	80	+ 1	— 7	— 5
Brick and Tile	61	63	— 4	+ 26	+ 17	120	126	— 4	+ 33	+ 30	61	64	— 4	+ 28	+ 21
Glass	80	80	+ x	— 12	— 10	168	177	— 5	— 11	— 6	76	79	— 3	— 17	— 13
Vitreous & Semi-Vit. China & Pottery	54	51	+ 6	— 4	— 1	150	137	+ 10	+ 8	+ 8	82	73	+ 12	— 3	— 2
Miscellaneous	95	89	+ 6	+ 4	+ 3	233	228	+ 2	+ 8	+ 8	99	96	+ 3	+ 2	+ 3
Textiles (37)	67	77	— 12	— 10	— x	101	113	— 10	— 2	+ 8	68	76	— 10	— 6	+ 2
Men's Clothing	81	83	— 2	— 4	— 2	108	109	— 2	+ 5	+ 9	77	76	+ 1	+ 4	+ 5
Miscellaneous	60	74	— 19	— 14	+ 1	100	121	— 17	— 8	+ 8	63	77	— 18	— 13	+ x
Vehicles (63)	79	81	— 2	— 11	+ 1	182	193	— 6	— 13	+ 7	69	73	— 5	— 20	— 2
Autos and Parts	88	90	— 2	— 14	+ 2	209	224	— 7	— 17	+ 7	76	81	— 6	— 23	— 3
Cars, Electric and Steam Railway	113	113	+ x	+ 21	+ 14	249	248	+ x	+ 30	+ 28	106	107	— x	+ 25	+ 21
Miscellaneous	55	53	+ 4	+ 3	— 6	110	110	+ x	+ 12	+ 3	52	52	+ x	+ 3	— 4
Miscellaneous Manufacturing (60)	68	67	+ 1	+ 8	— 1	140	138	+ 1	+ 16	+ 7	63	63	— x	+ 7	— 1
Total Trade, Service, and Utilities[w] (731)	**105**	**106**	**— 1**	**+ x**	**— x**	**234**	**234**	**+ x**	**+ 8**	**+ 8**	**111**	**112**	**— 1**	**+ 1**	**+ 1**
Service (212)	128	128	— x	+ 3	+ 3	249	251	— 1	+ 8	+ 8	148	149	— x	+ 4	+ 4
Trade, Retail and Wholesale (407)	91	93	— 2	— 3	— 3	203	206	— 2	+ 6	+ 6	92	93	— 2	— 2	— 2
Transportation & Public Utilities (112)	109	110	— x	+ 5	+ 2	295	282	+ 5	+ 14	+ 9	109	109	— 1	+ 5	+ 2
Construction (354)	**80**	**79**	**+ 2**	**+ 2**	**+ 7**	**196**	**188**	**+ 4**	**+ 10**	**+ 14**	**74**	**70**	**+ 5**	**+ 4**	**+ 8**
Mines and Quarries (31)	**129**	**128**	**+ 1**	**+ 1**	**+ 40**	**266**	**269**	**— 1**	**+ 16**	**+ 62**	**79**	**79**	**— 1**	**+ 6**	**+ 46**

Indexes of number employed and of payrolls are based on the employment of 522,099 persons (production workers in manufacturing and mining, construction workers in contract construction, and nonsupervisory employees in other categories) in 2,450 firms; indexes of man-hours, on the employment of 508,436 production workers and nonsupervisory employees in 2,353 firms. Figures in parentheses show number of firms reporting employment and payrolls. In some cases fewer firms report man-hours. Data do not include agriculture, government, education, or public institutions. For sources and footnotes, see below.

FOOTNOTES FOR BULLETIN TABLES AND CHARTS

†Change in number of failures; [a]Figures in parentheses show number of firms reporting this month; [n.a] Current data not available; [b]Comparable data not available; [c]Only percentage of change available; [d]Adjusted for seasonal change; [f]Adjusted for number of working days; [g]Four weeks average; [h]Annual rate; [p]Preliminary; [r]Revised; [s]Series revised; [w]Weighted; [x]Less than 0.5 percent; [y]More than 1,000 percent increase.

Primary Sources:

Computed from: [1]Center for Business and Economic Research multiple regression model.

Computed from original data collected by the Center for Business and Economic Research from: [2]Ohio retailers; [3]County Clerks of Courts; [4]Local Power and Light Companies.

Computed by the Center for Business and Economic Research from data supplied by: [5]Board of Governors of the Federal Reserve System; [6]Life Insurance Marketing and Research Association; [7]Division of Research and Statistics of the Ohio Bureau of Employment Services, collected in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor; [8]Federal Power Commission; [9]F. W. Dodge Division, McGraw-Hill Information Systems Company; [10]Dun & Bradstreet, Inc.

Other data sources: [11]Federal Reserve Board; [12]Dun & Bradstreet, Inc.; [13]U.S. Department of Commerce; [14]Division of Research and Statistics of the Ohio Bureau of Employment Services; [15]U.S. Department of Labor; [16]Department of Agricultural Economics, O.S.U.; [17]U.S. Department of Agriculture; [18]American Iron and Steel Institute; [19]U.S. Department of Energy; [20]National Machine Tool Builders' Association; [21]F. W. Dodge Division, McGraw-Hill Information Systems Company; [22]R. L. Polk & Co.; [23]Standard & Poor's Corporation.

Note: In the Ohio-U.S. table, page S-2, dual source notes on a single line of the table stub refer first to Ohio data, second to U.S. data.

Ohio Retail Sales Trends

August Sales of Ohio Retailers increased 5 percent over July sales before adjustment for seasonal variation—and showed a 4 percent gain in August from July after seasonal adjustment. The gain over year-ago August, +8 percent, was the largest percentage increase from a corresponding month in 1978 since January 1979.

For the First Eight Months of 1979, sales totaled 5 percent above cumulative sales in the first 8 months of 1978.

By Kind of Business, sales in most of the individual categories were above 1978 sales levels both in August and in the 8-month period of the year. Compared with sales in August 1978, the only declines for August 1979 were —7 percent in sales by lumber-building materials dealers, —6 percent by "other automotive" stores, and —4 percent by jewelry stores. A notable increase from sales in year-ago August was the 6 percent rise in sales by motor vehicle dealers. For the year-to-date, however, motor vehicle dealers and "other automotive" stores experienced the only sales declines from the first 8 months of 1978.

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INDEXES OF OHIO RETAIL SALES

KIND OF BUSINESS	INDEX (1957-59 = 100)		CHANGE			
			Aug. 1979 from July 1979		Aug. 1979 from Aug. 1978	8 mos. 1979 from 1978
	Aug. 1979 (p)	July 1979 (r)	Not Seas. Adj.	Seas. Adj.		
			%	%	%	%
Total Retail Stores[2, 8]	**297**	**284**	**+ 5**	**+ 4**	**+ 8**	**+ 5**
Grocery Stores	318	314	+ 2	+ 3	+ 4	+ 6
Other Food Stores	378	323	+17	+18	+20	+14
General Stores (With Food)	213	165	+30	+26	+13	+18
Department Stores	235	208	+13	+ 2	+10	+ 7
Other General Merchandise	203	188	+ 8	+ 4	+12	+ 6
Men's Clothing-Furns. Stores	108	116	— 6	—12	+ 5	+ x
Family Clothing Stores	143	152	— 7	—21	+ 5	+ 4
Women's Ready-to-Wear Stores	136	117	+17	— 9	+ 5	+ 4
Shoe Stores	123	88	+41	+32	+ 4	+ 3
Furniture Stores	223	219	+ 2	— 4	+ 3	+10
Household Appl.-TV-Rdio Strs.	262	190	+38	+33	+10	+ 4
Home Furnishings Stores	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Motor Vehicle Dealers	430	398	+ 8	+ 9	+ 6	— 3
Other Automotive	167	179	— 7	— 2	— 6	— 1
Filling Stations	392	391	+ x	+ 7	+28	+13
Lumber-Bldg. Matls. Dealers	345	342	+ 1	— 3	— 7	+ 3
Paint, Glass & Wallpaper Strs.	244	215	+13	+ 8	+ 7	+16
Heat.xPlumb. & Elec. Sup. Strs.	308	234	+32	+27	+12	+25
Hardware Stores	271	257	+ 6	+ 5	+ 5	+ 4
Farm Equipment Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Eating & Drinking Places	206	191	+ 8	+ 4	+13	+16
Drug Stores	231	214	+ 8	+ 7	+12	+ 6
Jewelry Stores	171	185	— 8	—16	— 4	+ 7
Florists	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Fuel Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hay-Feed, Farm & Grdn. Strs.	323	327	— 1	+45	+25	+20
State Liquor Stores	160	158	+ 1	+ 2	+ 4	+ 6

For sources and footnotes, see page S-3.

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BULLETIN OF BUSINESS RESEARCH

STATISTICAL SUMMARY

Center for Business and Economic Research
The Ohio State University

Volume LIV, Number 11 • November 1979

Business Conditions in Ohio and the United States

ITEM	OHIO						UNITED STATES					
				CHANGE FROM						CHANGE FROM		
		Sept. 1979	Aug. 1979	Last Month	Last Year			Sept. 1979	Aug. 1979	Last Month	Last Year	
	Unit or Index Base Period	(p)	(r)	Sept. 1979 from Aug. 1979	Sept. 1979 from Sept. 1978	9 months 1979 from 1978	Unit or Index Base Period	(p)	(r)	Sept. 1979 from Aug. 1979	Sept. 1979 from Sept. 1978	9 months 1979 from 1978
GENERAL BUSINESS				%	%	%				%	%	%
• Bank Debits[3, 11]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	*Bil. $ Ex.NY[4, h]*	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Number[12]	*Number*	n.a.	n.a.	n.a.	n.a.	n.a.	*Number*	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Liabilities[12]	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	n.a.	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	n.a.
Life Insurance Sales[6]	*1967*	285	320	— 11	+ 8	+ 18	*1967*	309	348	— 11	+ 10	+ 16
INCOME												
• Total Personal Income[1, 13]	*Mil. Dol.[4, h]*	94,955	94,192	+ 1	+ 10	+ 11	*Bil. Dol.[4, h]*	1,966	1,947	+ 1	+ 12	+ 12
Salaries & Wages Income[7, 13]	*Mil. Dol.[4, h]*	c	c	+ 2	+ 4	7	*Bil. Dol.[4, h]*	1,248	1,237	+ 1	+ 11	+ 12
Nonagricultural Income[13]		b	b	b	b	b	*Bil. Dol.[4, h]*	1,913	1,897	+ 1	+ 12	+ 12
Employee Earn.—Gross Wkly.: Mfgr.[14, 15]	*Dollars*	326.27	318.65	+ 2	+ 3	+ 7	*Dollars*	274.04	267.60	+ 2	+ 7	+ 8
" " Const.[14, 15]	*Dollars*	436.21	441.21	— 1	+ 5	+ 6	*Dollars*	360.05	354.16	+ 2	+ 8	+ 8
Agr. Income (Cash Mktgs.)[16, 17]	*1957–59*	n.a.	n.a.	n.a.	n.a.	n.a.	*1967*	n.a.	n.a.	n.a.	n.a.	n.a.
EMPLOYMENT & UNEMPLOYMENT												
Civilian Labor Force[14, 15]	*Thousands*	5,092	5,155	— 1	+ 1	+ 3	*Thousands*	103,373	104,363	— 1	+ 3	+ 3
Civilian Employment[14, 15]	*Thousands*	4,815	4,800	+ x	+ 1	+ 3	*Thousands*	97,576	98,226	— 1	+ 3	+ 3
Nonagricultural Employment[14, 15]	*Thousands*	4,528	4,471	+ 1	+ 2	+ 3	*Thousands*	94,030	94,431	— x	+ 3	+ 3
Mfg. Prod. Employment[7, 15]	*1967*	80	77	+ 5	— 3	— x	*1967*	106	104	+ 2	+ 1	+ 3
• Mfg. Prod. Payrolls[7, 15]	*1967*	182	170	+ 7	— x	+ 6	*1967*	254	244	+ 4	+ 8	+ 11
Average Weekly Hours—Mfg. Prod.[7, 15]	*Number*	41.3	40.8	+ 1	— 3	— 1	*Number*	40.3	40.0	+ 1	— 1	— x
Unemployment, Total—No.[14, 15]	*Thousands*	278	354	— 21	+ 2	+ 11	*Thousands*	5,798	6,137	— 6	+ x	— 3
Unemployment, Total—Rate[14, 15]	*Percent*	5.5	6.9				*Percent*	5.6	5.9			
Unemployment, Insured[14, 15]	*Thousands*	102	113	— 10	+ 74	+ 20	*Thousands*	2,165	2,379	— 9	+ 5	— 7
Registered for Work, O.B.E.S.[14]	*Thousands*	316	327	— 3	+ 1	— 7		b	b	b	b	b
Unemployment Compensation Fund[14]	*Mil. Dol.*	561	593	— 5	+ 35	+ 86		b	b	b	b	b
PRODUCTION												
Gross National Product (Quarterly)[13]		b	b	b	b	b	*Bil. Dol.[4, h]*	2,347	n.a.	n.a.	+ 9	+ 11
Industrial Production[7, 11]	*1967*	c	c	+ 6	— 6	— 2	*1967[d]*	152	152	+ 1	+ 3	+ 5
• Steel Production[18]	*Thous. Tons*	1,662	1,800	— 8	— 4	+ 7	*Thous. Tons*	10,541	11,309	— 7	— 8	+ 4
Electric Power Production[8]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	*Mil. KWH*	n.a.	n.a.	n.a.	n.a.	n.a.
Bituminous Coal Production[19]	*Thous. Tons*	3,284	3,976	— 17	— 11	+ 5	*Thous. Tons*	63,895	72,100	— 11	+ 11	+ 24
Pig Iron Production[18]	*Thous. Tons*	1,156	1,217	— 5	— x	+ 5	*Thous. Tons*	6,762	7,351	— 8	— 9	+ 4
Machine Tools—Shipments[20]		b	b	b	b	b	*Mil. Dol.*	348.85	285.35	+ 22	+ 32	+ 27
Machine Tools—New Orders[20]		b	b	b	b	b	*Mil. Dol.*	547.95	426.05	+ 29	+ 64	+ 33
Durable Goods—New Orders[13]		b	b	b	b	b	*Mil. Dol.[4]*	78,759	74,385	+ 6	+ 9	+ 14
CONSTRUCTION (Value of Contracts)												
• Total (Seas. Adj.)[9, 21]	*1967[d]*						*1967[d]*					
Total[9, 21]	*1967[f]*	238	243	— 2	+ 15	+ 10	*Mil. Dol.*	13,279	14,472	— 8	— 6	+ 5
Residential Building[9, 21]	*1967[f]*	236	252	— 6	— 13	— 4	*Mil. Dol.*	6,248	7,069	— 12	— 4	+ 3
Nonresidential Building[9, 21]	*1967[f]*	221	190	+ 16	+ 61	+ 30	*Mil. Dol.*	4,471	4,515	— 1	— 6	+ 12
Utilities and Non-Building Const.[9, 21]	*1967[f]*	289	361	— 20	+ 9	+ 7	*Mil. Dol.*	2,560	2,889	— 11	— 11	+ 1
DISTRIBUTION												
Total Retail Sales[2, 13]	*1957–59[d]*	275	299	— 8	+ x	+ 5	*Mil. Dol.[4]*	76,263	74,621	+ 2	+ 12	+ 11
Department Store Sales[2, 13]	*1957–59[d]*	281	257	+ 9	+ 6	+ 7	*Mil. Dol.[4]*	7,364	7,294	+ 1	+ 10	+ 7
• New Passenger Cars Registered[3, 22]	*1967*	109	124	— 13	+ x	— 7	*No.–49 sts.*	852,475	877,157	— 3	— 4	— 5
New Trucks Registered[3, 22]	*No.–40 cos.*	5,510	5,866	— 6	— 15	— 22	*No.–48 sts.*	293,058	285,607	+ 3	— 12	— 11
Used Cars Registered[3]	*No.–31 cos.*	28,523	35,327	— 19	— 13	— 9		b	b	b	b	b
PRICES												
• Consumer Price Index[15]:												
All Urban Consumers		b	b	b	b	b	*1967*	223	221	+ 1	+ 12	+ 11
Wage Earners & Clerical Workers		b	b	b	b	b	*1967*	224	222	+ 1	+ 12	+ 11
Producer Price Index[15]:												
All Commodities		b	b	b	b	b	*1967*	242	238	+ 2	+ 14	+ 12
Finished Goods		b	b	b	b	b	*1967*	220	217	+ 1	+ 12	+ 10
Intermediate Materials		b	b	b	b	b	*1967*	251	247	+ 1	+ 15	+ 11
Crude Materials		b	b	b	b	b	*1967*	288	282	+ 2	+ 18	+ 18
Sensitive Indus. Commodities[15]		b	b	b	b	b	*1967*	297	298	— x	+ 24	+ 29
BANKING AND FINANCE												
• Bank Loans, Large Banks—Total[11]	*Mil. Dol.*	23,369	22,497	+ 4	n.a.	n.a.	*Mil. Dol.*	399,732	386,234	+ 3	n.a.	n.a.
" " " " Bus. & Agric.[11]	*Mil. Dol.*	8,523	8,180	+ 4	n.a.	n.a.	*Mil. Dol.*	156,992	152,187	+ 3	n.a.	n.a.
Stock Price Index—400 Indust.[23]		b	b	b	b	b	*1941–43 = 10*	1,022.4	901.6	+ 2	+ 7	+ 7
" " " 40 Utils.[23]		b	b	b	b	b	*1941–43 = 10*	50.7	52.8	— 4	— 3	— 3
" " " 20 Utils.[23]		b	b	b	b	b	*1970 = 10*	15.7	16.5	— 5	+ 5	+ 4
Yield, Corp. AAA Bonds[23]		b	b	b	b	b	*Percent*	9.41	9.17	+ 3	+ 8	+ 7

• Indicates series charted (page S-1). For sources and footnotes, see page S-3.

Business Conditions in the 8 Largest OHIO CITIES

ITEM	Unit or Index Base Period	Sept. 1979 (p)	Aug. 1979 (r)	Change From Last Year: Sept. 1979 from Sept. 1978	Change From Last Year: 9 months 1979 from 1978	Sept. 1979 (p)	Aug. 1979 (r)	Change From Last Year: Sept. 1979 from Sept. 1978	Change From Last Year: 9 months 1979 from 1978	Sept. 1979 (p)	Aug. 1979 (r)	Change From Last Year: Sept. 1979 from Sept. 1978	Change From Last Year: 9 months 1979 from 1978	Sept. 1979 (p)	Aug. 1979 (r)	Change From Last Year: Sept. 1979 from Sept. 1978	Change From Last Year: 9 months 1979 from 1978
		AKRON				**CANTON**				**CINCINNATI**				**CLEVELAND**			
Number Employed[7]:				%	%			%	%			%	%			%	%
Total[w]	*1967*	83	79	— 7	— 6	100	101	+ 2	+ 4	89	97	— 6	— 2	93	89	— 2	+ x
Manufacturing	"	61	52	— 7	— 8	92	94	+ 2	+ 6	73	74	— 7	— 1	76	68	— 4	+ 1
Trade, Serv., & Utils.	"	111	113	— 6	— 4	114	115	+ 3	+ 1	104	120	— 7	— 4	110	110	— x	+ x
Construction	"	79	75	— 6	+ 3	87	83	— 3	+ 1	94	92	+ 3	+ 23	91	90	+ 6	+ 2
Payrolls[7]:																	
Total[w]	"	167	162	— 5	+ 1	247	246	+ 8	+ 13	225	241	— x	+ 8	210	200	+ x	+ 7
• Manufacturing	"	121	106	— 9	— 3	219	220	+ 6	+ 17	178	186	— 8	+ 1	163	144	— 8	+ 7
Trade, Serv., & Utils.	"	254	264	+ x	+ 5	325	322	+ 10	+ 9	284	313	+ 6	+ 11	2[illegible]	269	+ 5	+ 7
Construction	"	173	180	— 9	+ 7	204	188	+ 7	+ 6	240	232	+ 12	+ 39	243	237	+ 19	+ 10
Emp. Earn.—Gross Wkly.[7]:																	
All Industries[w]	$	301.37	310.06	+ 2	+ 7	323.29	317.86	+ 5	+ 9	286.92	286.53	+ 6	+ 10	346.66	344.12	+ 1	+ 7
Manufacturing	"	345.67	354.97	+ x	+ 5	350.25	345.39	+ 3	+ 9	326.02	338.05	— x	+ 4	366.73	359.86	— 4	+ 7
Trade, Serv., & Utils.	"	236.30	241.64	+ 7	+ 10	265.20	259.72	+ 7	+ 8	230.82	218.92	+ 16	+ 19	311.58	313.74	+ 5	+ 7
Construction	"	416.68	455.79	— 4	+ 3	447.54	434.84	+ 6	+ 5	451.54	444.66	+ 8	+ 13	491.41	485.45	+ 12	+ 6
Retail Sales[2]	%	c	c	— 3	+ 6	c	c	— 2	+ 9	c	c	— x	+ 4	c	c	— 3	+ 5
Auto Titles[3]:																	
New Cars	*No.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5,664	5,388	+ 20	— 7	6,887	7,900	— 4	— 10
New Trucks	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	828	828	— 3	— 14	877	1,074	— 12	— 12
Retail Food Prices[15]	*1967*	b	b	b	b	b	b	b	b	251	251	+ 10	+ 12	240	240	+ 7	+ 12
Bank Debits[5]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	*No.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	*Thous. $*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	*1967[f]*	159	149	— 1	+ 2	b	b	b	b	b	b	b	b	b	b	b	b
Value of Bldg. Const.[9]:																	
Total	"	203	174	— 4	+ 7	437	162	+186	+ 39	119	165	— 42	+ 25	120	87	+ 10	+ 11
Residential	"	239	226	+ 25	— 14	145	207	— 26	+ 9	108	162	— 47	+ 21	101	97	+ 10	— 1
Nonresidential	"	167	122	— 28	+ 48	794	106	+691	+ 95	129	167	— 37	+ 28	136	77	+ 10	+ 22
Steel Production[18]	*1967[g]*	b	b	b	b	b	b	b	b	88	96	— 21	— 4	132	128	+ 19	+ 15
Labor Force Estimates[11]:																	
Civilian Labor Force	*Thous.*	242.4	244.8	+ 1	+ 2	172.1	175.0	+ 3	+ 4	436.6	442.1	+ 2	+ 2	756.2	760.3	— x	+ 2
Civilian Employment	"	228.8	228.3	+ 1	+ 1	163.7	165.0	+ 3	+ 4	417.6	414.8	+ 4	+ 2	721.0	717.3	+ x	+ 2
Unemp. Total—No.	"	13.5	16.5	— 2	+ 8	8.4	10.0	+ 2	+ 6	19.0	27.3	— 17	+ 4	35.2	42.9	— 6	+ 7
Unemp., Total—Rate	%	5.6	6.7			4.9	5.7			4.3	6.2			4.7	5.6		
		COLUMBUS				**DAYTON**				**TOLEDO**				**YOUNGSTOWN**			
Number Employed[7]:				%	%			%	%			%	%			%	%
Total[w]	*1967*	104	103	— 2	+ x	108	102	+ x	+ 3	102	102	— 1	+ x	87	86	+ 7	+ 2
Manufacturing	"	73	72	— 9	— 6	69	59	— 5	— 1	81	82	— 10	— 5	59	59	+ 1	+ 1
Trade, Serv., & Utils.	"	126	125	— x	+ 2	163	163	+ 4	+ 5	122	123	+ 3	+ 3	123	121	+ 13	+ 3
Construction	"	79	79	+ 13	+ 10	110	109	— 1	+ 4	96	87	+ 22	+ 12	61	62	— 10	— 3
Payrolls[7]:																	
Total[w]	"	239	241	+ 3	+ 7	211	191	+ 5	+ 9	239	234	+ 5	+ 6	200	194	+ 17	+ 11
• Manufacturing	"	156	155	— 6	+ 2	145	120	— 3	+ 6	176	176	— 8	— 1	150	142	+ 8	+ 11
Trade, Serv., & Utils.	"	319	323	+ 5	+ 8	346	334	+ 13	+ 11	322	319	+ 11	+ 11	299	295	+ 30	+ 12
Construction	"	185	182	+ 23	+ 15	267	275	+ 4	+ 11	246	202	+ 43	+ 18	160	175	— 3	+ 10
Emp. Earn.—Gross Wkly.[7]:																	
All Industries[w]	$	273.72	280.30	+ 6	+ 8	343.30	332.39	+ 5	+ 8	328.03	323.45	+ 7	+ 7	320.77	312.02	+ 11	+ 10
Manufacturing	"	328.35	33[illegible].89	+ 6	+ 10	373.39	360.03	+ 2	+ 7	362.28	358.78	+ [illegible]	+ 6	367.52	347.13	+ 8	+ 10
Trade, Serv., & Utils.	"	226.03	234.83	+ 6	+ 7	288.93	278.50	+ 9	+ 8	275.76	272.13	+ 10	+ 8	243.31	242.11	+ 18	+ 9
Construction	"	388.60	382.15	+ 8	+ 3	434.31	448.02	+ 6	+ 7	502.40	481.12	+ 13	+ 4	478.11	513.47	+ 6	+ 13
Retail Sales[2]	%	c	c	+ 3	+ 3	c	c	n.a.	n.a.	c	c	— 1	+ 1	c	c	— x	+ 3
Auto Titles[3]:																	
New Cars	*No.*	3,913	5,151	— 7	— 6	2,786	3,192	— 4	— 13	n.a.	n.a.	n.a.	n.a.	n.a.	1,603	n.a.	n.a.
New Trucks	"	951	902	+ x	— 15	360	384	— 33	— 26	n.a.	n.a.	n.a.	n.a.	n.a.	273	n.a.	n.a.
Retail Food Prices[15]	*1967*	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
Bank Debits[5]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	*No.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	*Thous. $*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	*1967[f]*	b	b	b	b	b	b	b	b	151	157	— 8	+ 1	91	83	+ 7	+ 8
Value of Bldg. Const.[9]:																	
Total	"	227	317	+ 36	+ 40	177	142	+ 21	+ 30	165	151	+ 26	+ 62	224	245	+ 3	— 3
Residential	"	243	202	+ 22	+ 23	71	186	— 62	+ 23	147	274	— 47	— x	199	173	— 11	— 17
Nonresidential	"	210	431	+ 59	+ 56	310	87	+232	+ 37	175	85	+226	+161	255	328	+ 20	+ 18
Steel Production[18]	*1967[g]*	b	b	b	b	b	b	b	b	b	b	b	b	82	89	— 8	+ 3
Labor Force Estimates[11]:																	
Civilian Labor Force	*Thous.*	439.4	442.5	+ 3	+ 5	275.9	277.4	+ 4	+ 5	225.8	227.1	— 6	— 4	133.2	135.4	+ 1	+ 3
Civilian Employment	"	420.2	419.5	+ 4	+ 5	255.8	252.3	+ x	+ 2	210.0	208.8	— 7	— 5	124.7	123.5	+ 2	+ 4
Unemp. Total—No.	"	19.2	23.0	— 13	+ 7	20.2	25.1	+ 86	+ 51	15.8	18.3	+ 2	+ 1	8.5	11.9	— 11	— 13
Unemp., Total—Rate	%	4.4	5.2			7.3	9.1			7.0	8.0			6.3	8.8		

NOTE: All data are for county areas except bank debits and commercial failures, which are for areas within city limits. The indexes of number employed and payrolls and the employee weekly earnings are based on data for production workers in manufacturing, construction workers in contract construction, and nonsupervisory employees in other categories which exclude agriculture, government, education, and public institutions.

• Indicates series charted (page S-3). For sources and footnotes, see page S-3.

Number Employed, Payrolls, and Man-Hours in Ohio Industry

INDUSTRIAL GROUP	NUMBER EMPLOYED[7]					PAYROLLS[7]					MAN-HOURS[7]				
	INDEX (1967 = 100)		CHANGE			INDEX (1967 = 100)		CHANGE			INDEX (1967 = 100)		CHANGE		
	Sept. 1979 (p)	Aug. 1979 (r)	Sept. 1979 from Aug. 1979	Sept. 1979 from Sept. 1978	9 months 1979 from 1978	Sept. 1979 (r)	Aug. 1979 (p)	Sept. 1979 from Aug. 1979	Sept. 1979 from Sept. 1978	9 months 1979 from 1978	Sept. 1979 (p)	Aug. 1979 (r)	Sept. 1979 from Aug. 1979	Sept. 1979 from Sept. 1978	9 months 1979 from 1978
			%	%	%			%	%	%			%	%	%
Total[w] (2,440)[a]	**91**	**89**	**+ 2**	**— 1**	**+ x**	**201**	**195**	**+ 3**	**+ 3**	**+ 8**	**88**	**88**	**+ 1**	**— 3**	**— x**
All Manufacturing[w] (1,329)	**80**	**77**	**+ 5**	**— 3**	**— x**	**182**	**170**	**+ 7**	**— x**	**+ 6**	**75**	**71**	**+ 6**	**— 6**	**— 2**
Chemicals (69)	99	100	— 2	— 1	+ 1	218	217	+ x	+ 5	+ 8	96	96	— x	— 1	+ 1
Food Products (91)	88	84	+ 4	+ x	— 2	211	204	+ 3	+ 7	+ 4	82	77	+ 7	+ 1	— 4
Bakery	76	77	— 1	+ 7	— 4	179	177	+ 1	+ 17	+ 5	73	72	+ 1	+ 8	— 4
Miscellaneous	89	85	+ 5	— 1	— 1	214	207	+ 4	+ 7	+ 4	82	77	+ 7	— x	— 4
Lumber Products (47)	94	93	+ 1	— 6	+ x	189	182	+ 4	+ 2	+ 7	86	84	+ 1	— 6	— 1
Furniture	101	100	+ 1	— 9	— 1	203	195	+ 4	— 1	+ 4	97	96	+ 1	— 9	— 2
Miscellaneous	84	82	+ 2	+ x	+ 5	169	164	+ 3	+ 10	+ 13	70	69	+ 2	+ 1	+ 3
Machinery (309)	77	73	+ 6	+ 2	+ 1	165	153	+ 8	+ 10	+ 9	73	68	+ 7	+ x	+ x
Elec. Mach., Apparatus and Supplies	85	80	+ 6	+ 2	— x	193	174	+ 11	+ 10	+ 6	81	75	+ 8	+ 1	— 2
Machine Tools	66	64	+ 3	+ 4	+ 5	148	139	+ 7	+ 15	+ 16	67	65	+ 4	+ 3	+ 6
Agricultural Equipment	49	49	— 1	+ 6	+ 6	106	107	— 1	+ 18	+ 16	54	55	— 1	+ 8	+ 6
Special Machinery and Appliances	72	68	+ 7	+ 1	+ 1	143	136	+ 5	+ 7	+ 9	67	63	+ 6	— 2	+ 1
Metal Products (358)	86	81	+ 6	— 5	+ x	195	181	+ 8	— 4	+ 7	78	73	+ 7	— 9	— 1
Foundry Products and Drop Forgings	94	78	+ 21	— 11	— 3	223	177	+ 26	— 13	+ 2	77	63	+ 22	— 16	— 5
Pipes, Vaives, and Plumbers' Supplies	82	84	— 3	— 4	+ 13	204	203	+ x	+ 1	+ 16	93	94	— 1	— 5	+ 8
Screw Machine Products and Hdwe.	94	94	+ x	— 4	+ 3	171	168	+ 2	— 9	+ 4	94	95	— x	— 10	— 2
Sheet Metal Work	92	84	+ 10	— 10	— 2	204	175	+ 16	— 10	— x	79	70	+ 13	— 14	— 7
Steel Works and Rolling Mills	80	78	+ 3	— 2	+ 2	185	179	+ 3	+ 1	+ 11	76	72	+ 5	— 6	+ 2
Stoves and Furnaces	96	100	— 4	— 19	— 5	191	197	— 3	— 14	+ 3	101	105	— 4	— 21	— 7
Miscellaneous	82	79	+ 4	— 3	+ 1	178	170	+ 4	— x	+ 10	69	67	+ 4	— 6	+ 1
Paper and Printing (146)	67	66	+ 1	— 2	— 2	170	164	+ 4	+ 5	+ 3	65	63	+ 3	— 3	— 4
Paper and Pulp	49	50	— 1	— 4	— 4	167	158	+ 6	+ 6	+ 2	44	42	+ 5	— 3	— 7
Printing and Publishing	80	80	— x	— 1	— 2	181	180	+ 1	+ 7	+ 5	75	74	+ 1	+ 1	— 1
Miscellaneous	68	66	+ 3	— 1	— 2	161	155	+ 4	+ 4	+ 3	69	67	+ 3	— 4	— 3
Rubber Products (55)	69	62	+ 10	— 7	— 5	158	140	+ 13	— 3	+ 4	63	57	+ 12	— 8	— 4
Tires and Tubes	50	50	+ x	— 5	— 8	106	104	+ 2	+ 2	+ 2	37	37	+ 1	— 6	— 6
Miscellaneous	79	69	+ 15	— 9	— 4	200	166	+ 21	— 6	+ 6	86	73	+ 18	— 9	— 3
Stone, Clay, and Glass Products (94)	76	76	— x	— 7	— 4	183	176	+ 4	— 5	+ 1	83	81	+ 3	— 10	— 5
Brick and Tile	61	61	+ x	+ 2	+ 16	121	120	+ x	+ 9	+ 27	61	61	— 1	+ 2	+ 18
Glass	79	80	— 1	— 15	— 11	174	168	+ 4	— 15	— 7	78	76	+ 2	— 19	— 14
Vitreous & Semi-Vit. China & Pottery	57	54	+ 5	— 1	— 1	158	150	+ 6	+ 6	+ 8	86	82	+ 6	— 3	— 2
Miscellaneous	93	95	— 2	+ 5	+ 3	245	233	+ 5	+ 10	+ 8	101	99	+ 3	+ 3	+ 3
Textiles (37)	72	67	+ 7	— 3	— 1	108	101	+ 7	+ 1	+ 7	74	68	+ 8	— 1	+ 2
Men's Clothing	83	81	+ 2	— x	— 2	111	108	+ 3	+ 5	+ 8	81	77	+ 5	+ 7	+ 5
Miscellaneous	67	60	+ 12	— 5	+ x	110	100	+ 10	— 3	+ 7	70	63	+ 10	— 7	— x
Vehicles (63)	87	79	+ 10	— 5	+ x	202	182	+ 11	— 13	+ 5	77	69	+ 12	— 15	— 4
Autos and Parts	98	88	+ 11	— 8	+ 1	233	209	+ 11	— 17	+ 4	85	76	+ 12	— 20	— 5
Cars, Electric and Steam Railway	119	113	+ 5	+ 19	+ 15	268	249	+ 8	+ 17	+ 26	113	106	+ 6	+ 17	+ 20
Miscellaneous	56	55	+ 2	+ 24	— 3	123	110	+ 12	+ 34	+ 6	57	52	+ 9	+ 24	— 1
Miscellaneous Manufacturing (60)	65	68	— 4	— 4	— 1	129	140	— 8	— 4	+ 6	57	63	— 9	— 10	— 2
Total Trade, Service, and Utilities[w] (728)	**103**	**105**	**— 1**	**— 1**	**— x**	**232**	**234**	**— 1**	**+ 7**	**+ 7**	**107**	**111**	**— 4**	**— x**	**+ 1**
Service (213)	122	128	— 4	+ x	+ 3	244	249	— 2	+ 6	+ 8	136	148	— 8	+ 2	+ 3
Trade, Retail and Wholesale (403)	92	91	+ 1	— 2	— 3	202	203	— 1	+ 5	+ 6	91	92	— 1	— 3	— 2
Transportation & Public Utilities (112)	109	109	— x	+ 4	+ 2	295	295	— x	+ 12	+ 9	108	109	— 1	+ 4	+ 2
Construction (352)	**81**	**80**	**+ 1**	**+ 3**	**+ 6**	**202**	**196**	**+ 3**	**+ 12**	**+ 14**	**74**	**74**	**+ 1**	**+ 5**	**+ 7**
Mines and Quarries (31)	**129**	**129**	**— x**	**— x**	**+ 34**	**268**	**266**	**+ 1**	**+ 12**	**+ 54**	**78**	**79**	**— 1**	**+ 3**	**+ 40**

Indexes of number employed and of payrolls are based on the employment of 541,786 persons (production workers in manufacturing and mining, construction workers in contract construction, and nonsupervisory employees in other categories) in 2,440 firms; indexes of man-hours, on the employment of 528,114 production workers and nonsupervisory employees in 2,342 firms. Figures in parentheses show number of firms reporting employment and payrolls. In some cases fewer firms report man-hours. Data do not include agriculture, government, education, or public institutions. For sources and footnotes, see below.

FOOTNOTES FOR BULLETIN TABLES AND CHARTS

[†] Change in number of failures: [a]Figures in parentheses show number of firms reporting this month: [n.a.]Current data not available: [b]Comparable data not available: [c]Only percentage of change available: [d]Adjusted for seasonal change: [f]Adjusted for number of working days: [g]Four weeks average: [h]Annual rate: [p]Preliminary: [r]Revised: [s]Series revised: [w]Weighted: [x]Less than 0.5 percent: [y]More than 1,000 percent increase.

Primary Sources:

Computed from: [1]Center for Business and Economic Research multiple regression model.

Computed from original data collected by the Center for Business and Economic Research from: [2]Ohio retailers: [3]County Clerks of Courts: [4]Local Power and Light Companies.

Computed by the Center for Business and Economic Research from data supplied by: [5]Board of Governors of the Federal Reserve System: [6]Life Insurance Marketing and Research Association: [7]Division of Research and Statistics of the Ohio Bureau of Employment Services, collected in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor: [8]Federal Power Commission: [9]F. W. Dodge Division, McGraw-Hill Information Systems Company; [10]Dun & Bradstreet, Inc.

Other data sources: [11]Federal Reserve Board: [12]Dun & Bradstreet, Inc.: [13]U.S. Department of Commerce: [14]Division of Research and Statistics of the Ohio Bureau of Employment Services: [15]U.S. Department of Labor; [16]Department of Agricultural Economics, O.S.U.: [17]U.S. Department of Agriculture: [18]American Iron and Steel Institute; [19]U.S. Department of Energy: [20]National Machine Tool Builders' Association: [21]F. W. Dodge Division, McGraw-Hill Information Systems Company; [22]R. L. Polk & Co.; [23]Standard & Poor's Corporation

Note: In the Ohio-U.S. table, page S-2, dual source notes on a single line of the table stub refer first to Ohio data, second to U.S. data.

Ohio Retail Sales Trends

September Sales of Ohio Retailers dropped 9 percent below August sales before seasonal adjustment and were 8 percent lower than sales in August after adjustment for seasonal variation. Sales in September 1979 were a fraction of a percent higher than sales in year-ago September.

For the First Three Quarters of 1979, total sales were 5 percent greater than during the first three quarters of 1978.

By Kind of Business, declines in September from August were widespread, as only 5 of the 24 lines shown individually had month-to-month gains. The most substantial September-from-August gains were by shoe stores (+21 percent) and department stores (+16 percent). The largest declines were in sales by florists (—25 percent), hay-feed, farm and garden supply stores (—24 percent), and motor vehicle dealers (—24 percent). September-from-September comparisons were more evenly divided, with 13 categories having sales increases and 11 categories having sales declines. For the first three quarters of the year, all but 3 kinds of business continued to show higher sales totals in 1979 than in 1978.

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INDEXES OF OHIO RETAIL SALES

KIND OF BUSINESS	INDEX (1957–59 = 100)		CHANGE			
	Sept. 1979 (p)	Aug. 1979 (r)	Sept. 1979 from Aug. 1979 Not Seas. Adj.	Sept. 1979 from Aug. 1979 Seas. Adj.	Sept. 1979 from Sept. 1978	9 mos. 1979 from 1978
			%	%	%	%
Total Retail Stores	**270**	**297**	**— 9**	**— 8**	**+ x**	**+ 5**
Grocery Stores	292	318	— 8	— 9	+ 1	+ 6
Other Food Stores	329	378	—13	—13	— 4	+12
General Stores (With Food)	178	213	—16	—18	+19	+18
Department Stores	271	235	+16	+10	+ 6	+ 7
Other General Merchandise	204	203	+ x	— 2	+19	+ 8
Men's Clothing–Furns. Stores	101	109	— 7	—14	— 9	— 1
Family Clothing Stores	116	143	—18	—34	+ x	+ 4
Women's Ready-to-Wear Strs.	151	136	+11	—10	— 2	+ 3
Shoe Stores	149	124	+21	+ 7	+ 7	+ 3
Furniture Stores	216	223	— 3	+ 4	+ 1	+ 9
Household Appl.–TV-Rdio Strs.	260	262	— 1	+ x	— 6	+ 2
Home Furnishings Stores	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Motor Vehicle Dealers	329	430	—24	—15	— 6	— 3
Other Automotive	133	167	—20	—10	— 6	— 2
Filling Stations	356	392	— 9	— 5	+ 8	+12
Lumber–Bldg. Matls. Dealers	314	345	— 9	— 3	—11	+ 1
Paint, Glass & Wallpaper Strs.	203	244	—17	— x	+ x	+14
Heat.–Plumb. & Elec. Sup. Strs.	286	309	— 7	—10	+26	+25
Hardware Stores	208	271	—23	—22	—21	+ 1
Farm Equipment Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Eating & Drinking Places	207	206	+ x	+ 1	+12	+15
Drug Stores	210	231	— 9	— 8	+ 1	+ 6
Jewelry Stores	162	171	— 5	+ x	— 2	+ 6
Florists	120	159	—25	—38	— 3	+15
Fuel Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hay–Feed, Farm & Grdn. Strs.	244	323	—24	—27	+ 3	+18
State Liquor Stores	154	160	— 4	— 5	— 1	+ 5

For sources and footnotes, see page S-3.

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By WILFORD L. L'ESPERANCE

Commercial Banking and the Economic Development of Ohio and Columbus

O money, money, money, I'm not necessarily
one of those who think thee holy
But I often stop to wonder how thou canst
go out so fast when thou comest in
so slowly
—Ogden Nash, "Hymn to the Thing
That Makes the Wolf Go"

If the proper use of money is the root of all that is munificent and necessary for the economic development of Ohio and Columbus, it surely deserves a close examination.[1]

This article examines the role of private finance in the economic development of Ohio and Columbus. Finance refers to the sources and use of financial capital as opposed to physical capital. For my purposes private finance refers to the claims and debits of commercial banks, savings and loan associations, credit unions, insurance companies, and mortgage loan companies in Ohio and Columbus.

The Private Financial Sector of Ohio and Columbus

Private financial institutions (e.g., commercial banks, savings and loan associations, credit unions, and mortgage loan companies) play a crucial role in the economic development of a city and state. Among these institutions commercial banks are the most important because of the flexibility of their operations. They have a greater access to a variety of funds, and have a greater variety of uses to which they put their funds than the other institutions. Second in importance are savings and loan associations (S&Ls). These two institutions, especially commercial banks, will be my primary concern. (A brief history of banking in Ohio is given in Campbell [1979][2].)

In order to understand the contribution that banks and savings and loan associations make to the Ohio and Columbus economies, consider as a measure of the size of the "monetary economy" of the city and State the total deposits of these two financial institutions. The importance of such regional monetary economies lies not only in the services delivered by these financial institutions, but also in the number of jobs and the level of income generated by them.

The size of their total deposits is a reflection of the ability of these institutions to attract funds that are eventually used for a variety of purposes such as making loans and investments, which are, in turn, examples of the creation and transformation of the assets of these institutions. The greater the ability to do so, the greater is the contribution of these institutions to the economic development of Ohio and Columbus. In fact "total deposits" will be used as a measure of size of the monetary economy of Ohio and Columbus.

Ideally, an appropriate definition of the money stock rather than the deposits of commercial banks and S&Ls should be used to determine the size of the local monetary economy. But, at the state and the urban level, measures of the money stock are not compiled. Neither M_1 (currency plus commercial bank deposits held by the non-banking public) nor M_2 (M_1 plus time deposits of commercial

(Continued on page 2)

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[1] In the summer of 1979 members of the Mayor's Economic Development Council of Columbus, Ohio, took a poll among themselves to determine the most important issues regarding the economic development of Columbus. The most important one was the economic vitality of the central business district of Columbus. Second most important was the role that finance plays in the economic development of Columbus and Ohio. This article discusses this second most important issue, and covers the private financial sector. A second discussion paper will review the role of public finance in the economic development of Columbus and Ohio.

[2] References are listed at the end of this article.

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Statistical Summary .... *pages* S-1 *through* S-4
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  Business Conditions in the 8 Largest Ohio Cities .... *page* S-2
  Ohio Retail Sales Trends .... *page* S-4
  Index of Articles in Volume LIV of Bulletin of Business Research .... *page* S-4

Commercial Banking and the Economic Development of Ohio and Columbus

(Continued from page 1)

TABLE 1
DEPOSITS OF COMMERCIAL BANKS AND SAVINGS AND LOAN INSTITUTIONS, UNITED STATES, OHIO, COLUMBUS SMSA, AND FRANKLIN COUNTY, 1968-1975

Area and Type of Deposit	Amount (*Billions of Current Dollars*)							
	1968	1969	1970	1971	1972	1973	1974	1975
United States								
Commercial Bank Deposits	432.7	434.1	479.2	535.7	613.0	677.3	748.3	741.7
Demand	227.9	239.2	246.2	261.1	294.9	307.6	315.8	294.2
Time	204.7	194.9	233.0	274.6	318.1	369.7	432.5	447.5
Savings and Loan Deposits	131.7	135.7	146.3	174.2	206.7	227.3	243.3	286.6
Ohio								
Commercial Bank Deposits	20.2	20.3	21.7	23.6	26.7	28.3	29.6	29.4
Demand	9.2	9.5	9.6	9.8	11.4	11.3	11.2	10.1
Time	10.9	10.3	12.1	13.7	15.3	16.9	18.5	19.3
Savings and Loan Deposits	10.4	10.6	11.3	13.2	15.1	16.4	17.6	20.2
Columbus SMSA								
Commercial Bank Deposits	1.9	1.9	2.0	2.3	2.6	2.7	2.7	n.a.
Savings and Loan Deposits	0.7	0.8	0.9	1.0	1.3	1.5	1.7	2.0
Franklin County								
Commercial Bank Deposits	1.6	1.6	1.7	2.0	2.2	2.4	2.3	2.3

n.a. Not available.

Source: Federal Reserve Bank of Cleveland (commercial bank deposits) and Federal Home Loan Bank of Cincinnati (savings and loan deposits).

banks) is available.[3] In the absence of comprehensive measures of regional monetary activity, "total deposits" of commercial banks and savings and loan institutions are worthwhile indicators of money-type activity at the urban and state levels.

Size of total deposits alone offers little information; therefore, Ohio and Columbus are compared to the U.S. Also, the size of the "total deposits" of banks and S&Ls are compared to their appropriate gross area product. For example, for the U.S., the time series ratio of U.S. commercial bank deposits to Gross National Product is calculated. The same ratio is determined for Ohio using Gross State Product of Ohio (L'Esperance 1976), and for the Columbus SMSA using Gross Urban Product-Columbus SMSA and Gross Urban Product-Franklin County (L'Esperance and Chall 1979). The geographical areas are compared, in terms of the size of their respective ratios.

Specifically, gross area product is the yardstick used to indicate the area's ability to generate these financial deposits. Naturally, the higher the gross area product, the greater the level of deposits.

Several tables are included to describe the size and importance of the monetary economies of Ohio and the Columbus SMSA.

Table 1 depicts the deposit growth of commercial banks and savings and loan institutions for the U.S., Ohio, Columbus SMSA, and Franklin County. For commercial banks in the U.S. and Ohio, total deposits are broken down into demand and time deposits. It is easily seen from Table 1 that S&L deposits have been growing much faster than the time or demand deposits of commercial banks.

Table 2 presents measures of total economic activity in the form of gross area product for the U.S., Ohio, and local areas. Gross National Product (GNP) is a measure of the national output of goods and services. The gross area products for Ohio and the Columbus SMSA were developed in order to make a comparison among regions and provide a determination of the condition of the economies of Ohio and Columbus. Such area products are the analog of GNP.

TABLE 2
GROSS NATIONAL PRODUCT, GROSS STATE PRODUCT–OHIO, GROSS URBAN PRODUCT–COLUMBUS SMSA, AND GROSS URBAN PRODUCT–FRANKLIN COUNTY, 1968-1975

Item	Amount (*Billions of Current Dollars*)							
	1968	1969	1970	1971	1972	1973	1974	1975
Gross National Product	846.2	929.1	974.1	1,055.5	1,171.1	1,306.3	1,406.9	1,498.9
Gross State Product—Ohio	47.3	51.1	52.7	56.1	60.7	67.8	73.0	77.7
Gross Urban Product—								
Columbus SMSA	4.0	4.4	4.7	5.2	5.6	6.3	6.8	7.2
Franklin County	3.7	4.0	4.3	4.7	5.0	5.7	6.2	6.6

Source: U.S. Department of Commerce, *Survey of Current Business* (GNP); L'Esperance, Wilford L., "An Overview of the Ohio Economy," *Bulletin of Business Research*, The Ohio State University, January 1976 (GSP-Ohio, 1968-1972); and L'Esperance, Wilford L., and Chall, Daniel E., "The Concept and an Estimate of Gross Urban Product," Manuscript, Department of Economics, The Ohio State University, 1979 (GSP-Ohio, 1973-1975; GUP—Columbus SMSA; and GUP—Franklin County).

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[3] Such estimates can be made from reports submitted to the Federal Deposit Insurance Corporation (FDIC) and the Federal Savings and Loan Insurance Corporation (FSLIC). The source data are available from the Federal Reserve Board and the Federal Home Loan Bank. A method for preparing these estimates is suggested by Cohen and Maeshiro (1977).

TABLE 3
PERCENTAGE CHANGE OF DEPOSITS OF COMMERCIAL BANKS AND SAVINGS AND LOAN INSTITUTIONS AND GROSS AREA PRODUCTS, UNITED STATES, OHIO, COLUMBUS SMSA, AND FRANKLIN COUNTY, ANNUALLY, 1968-1975

Area and Item	Percentage Change 1969 from 1968	1970 from 1969	1971 from 1970	1972 from 1971	1973 from 1972	1974 from 1973	1975 from 1974
United States							
Commercial Bank Deposits	0.3	10.4	11.8	14.4	10.5	10.5	— 0.9
Demand	4.9	2.9	6.1	13.0	4.3	2.7	— 6.9
Time	—4.8	19.5	17.9	15.8	16.2	17.0	3.5
Savings and Loan Deposits	3.1	7.8	19.0	18.7	9.9	7.1	17.8
Ohio							
Commercial Bank Deposits	1.3	6.6	8.7	13.1	6.0	4.8	— 0.8
Demand	3.3	1.2	2.6	15.7	— 0.3	— 1.3	— 9.8
Time	—0.4	11.4	13.6	11.3	10.7	9.0	4.6
Savings and Loan Deposits	2.0	7.0	16.5	14.3	8.6	7.2	14.7
Columbus SMSA							
Commercial Bank Deposits	—0.5	8.2	15.0	10.5	7.0	— 1.1	.
Savings and Loan Deposits	6.5	14.8	18.7	19.5	21.3	14.4	16.7
Franklin County							
Commercial Bank Deposits	—1.5	8.5	15.3	10.1	6.8	— 2.2	0.6
Gross National Product	7.5	4.8	8.4	11.0	11.5	7.7	6.5
Gross State Product—Ohio	8.0	3.1	6.5	8.3	11.5	7.7	6.5
Gross Urban Product—Columbus SMSA	9.5	6.1	10.3	7.6	12.7	7.7	6.5
Gross Urban Product—Franklin County	9.5	6.0	10.0	6.8	13.3	7.7	6.5

Source: Unrounded data that are summarized in Table 1 and Table 2.

Table 3 shows the year-to-year percentage changes in the level of the variables presented in Tables 1 and 2. For financial variables it is easily seen that S&L deposits have been growing rapidly for the U.S. and slightly less rapidly for Ohio. Also significant is the slower growth of Ohio bank deposits than U.S. bank deposits, especially for the years 1972-1974. The contraction in demand deposits in 1974-1975 was greater in Ohio than it was in the U.S. For Columbus the relative slower growth in the period 1972-1974 than in either Ohio or the U.S. must be observed. In sharp contrast, Columbus S&Ls experienced a dramatic increase in deposits. From percentage changes in the gross area products of the U.S., Ohio, Columbus SMSA, and Franklin County, an overall greater growth in the local economy than in either Ohio or the U.S. is easily discernible.

Table 4 shows the ratio of commercial bank deposits to gross area product. For the U.S. and Ohio, commercial bank deposits are broken down into demand and time deposits. The steady increase in the ratio of time deposits to GNP stands in contrast to the steady decline in the ratio of demand deposits to GNP. The ratio of Ohio commercial bank deposits to Gross State Product-Ohio shows that the same trends occurred in Ohio as in the U.S. However, the recent ratios for Ohio are discernably less than they are for the U.S. In 1975, for example, the ratios for demand and time deposits in Ohio are roughly 6 percentage points less than the ones for the U.S.

The ratio of a given area's total commercial bank deposits to the gross area product are shown for four regions: the U.S., Ohio, Columbus SMSA, and Franklin County. For example, in 1968 the ratio of total commercial bank deposits in the U.S. to GNP was 50 percent. In 1968 the ratio of Ohio commercial bank deposits to Gross State

(Continued on page 4)

TABLE 4
RATIO OF COMMERCIAL BANK DEPOSITS TO GROSS AREA PRODUCT, UNITED STATES, OHIO, COLUMBUS SMSA, AND FRANKLIN COUNTY, 1968-1975

Year	United States Deposits/GNP *(Percent)*			Ohio Deposits/GSP *(Percent)*			Columbus SMSA Deposits/GUP *(Percent)*	Franklin County Deposits/GUP *(Percent)*
	Demand Deposits	Time Deposits	Total Deposits	Demand Deposits	Time Deposits	Total Deposits		
1968	26	24	50	19	23	43	46	44
1969	26	21	47	19	21	40	42	40
1970	25	24	49	18	23	41	43	41
1971	25	26	51	18	25	42	45	43
1972	25	27	52	19	25	44	46	44
1973	24	28	52	17	25	42	44	41
1974	22	31	53	15	25	41	40	38
1975	20	30	50	13	25	38	..	36

Source: Unrounded data that are summarized in Table 1 and Table 2.

Commercial Banking and the Economic Development of Ohio and Columbus

(Continued from page 3)

Product-Ohio was 43 percent. The ratios for the three Ohio regions are less than they are for the U.S.

The salient feaures of these tables are:

1. GNP tends to grow a bit faster than GSP. This is evident for the years 1969-1972. In general, national recessions hit Ohio harder than most other states, and Ohio never quite catches up to its pre-recession relative position with the U.S. economy (L'Esperance 1976).
2. The economy of the Columbus SMSA is growing at a faster rate than either the U.S. or Ohio economies.
3. With respect to the total deposits of commercial banks, their Ohio growth is discernibly less than the U.S. It is much less than is warranted by the relative size of GSP-Ohio to GNP. For example, in the pre-recession year of 1974 the ratio of GSP-Ohio to GNP was 5.2 percent and the ratio of Ohio total commercial bank deposits to U.S. total commercial bank deposits was 4.0 percent, 1.2 percentage points less.
4. A slight, but steady, decline is shown in the ratios of commercial bank deposits to the area products of Ohio, the Columbus SMSA, and Franklin County. This relationship is contrary to the behavior of the U.S. ratio.

Table 5 shows the ratios of S&L deposits to measures of gross area product for each of three regions: U.S., Ohio, and the Columbus SMSA. For example in 1968 the ratio of S&L deposits at the national level to GNP was 15 percent. Table 5 shows an increasing trend in the annual ratio of S&L deposits to GNP, Gross State Product-Ohio, and Gross Urban Product-Columbus SMSA. In short, S&L institutions are making strong progress in capturing a larger share of the deposit potential. Ohio and Columbus commercial banks, in particular, are noticeably affected by the expansion of S&L deposits.

The following is an explanation of these trends, particularly why Ohio banking activity is relatively less than U.S. banking activity.

TABLE 5
RATIO OF SAVINGS AND LOAN DEPOSITS TO GROSS AREA PRODUCT, UNITED STATES, OHIO, AND COLUMBUS SMSA, 1965-1978

Year	United States Deposits/GNP *(Percent)*	Ohio Deposits/GSP *(Percent)*	Columbus SMSA Deposits/GUP *(Percent)*
1968	15	22	18
1969	15	21	17
1970	15	22	19
1971	17	24	20
1972	18	25	23
1973	17	24	24
1974	17	24	26
1975	19	26	28

Source: Unrounded data that are summarized in Table 1 and Table 2.

A Summary of Commercial Banking in Ohio

It is well known that commercial banking has experienced a relative increase in the importance of time to demand deposits. This is true for the U.S., Ohio, and the Columbus SMSA. However, the pattern and degree of this change is different for each of these areas.

As an example of area differences, compare U.S. and Ohio data in Table 4. This table highlights the deposit activity of commercial banks as a ratio to pertinent gross area product. The ratio measures for Ohio are lower than those for the U.S., both in the demand and time deposit categories. For the last four years, Ohio's share of U.S. deposits (both time and demand) declined. The disparity between the U.S. and Ohio, in terms of deposit activity, reflects several tendencies.

First, despite the large size of the state of Ohio, it is much less important as a commercial banking state than many other states of comparable size. This conclusion is confirmed by Maclin (1977) who compares Ohio banks' participation in the expansion of U.S. banks from 1969-1975. Ohio is also compared to Michigan and Pennsylvania. She concludes that:

> While Pennsylvania banking activity was on a par with or well above the national rate from 1969 through 1975, Ohio's banking activity remained approximately 20 percent below the national rate in the area of assets and deposits and 10 percent below in capital accounts. (p. 3)
>
> Ohio banks were also less active than those in Michigan in the acquisition of assets and deposits but better than Michigan banks in generating capital. (p. 3)
>
> Markets for federal funds, repurchase agreements (RP's), and other borrowed funds are also primarily national in scope. Ohio banks' participation in these markets is especially low relative to national rates. (p. 6)
>
> Ohio banks' total lending activities are roughly 20 percent below the national norm which accounts for much of the banks' below average participation in total assets. (p. 8)

Second, the faster growth of time deposits outside the state reflects the faster growth of savings elsewhere.

Third, the ability of Ohio's S&Ls to capture a larger share of the Ohio deposit market (40 percent) than U.S. S&Ls have been able to capture throughout the country (28 percent), as shown by 1975 data in Table 1, points to significant marketing deficiencies in the Ohio commercial banking industry. It also strongly suggests that Ohio is a net borrower of funds from other states, particularly Illinois (Chicago), Pennsylvania (Pittsburgh and Philadelphia), and New York (New York City).

What explains this peculiar behavior of Ohio's commercial banks? Why are they seemingly more conservative

(Continued on page 5)

BULLETIN OF BUSINESS RESEARCH

STATISTICAL SUMMARY

Center for Business and Economic Research
The Ohio State University

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Business Conditions in Ohio and the United States

ITEM	OHIO						UNITED STATES					
				CHANGE FROM						CHANGE FROM		
				Last Month	Last Year					Last Month	Last Year	
	Unit or Index Base Period	Oct. 1979 (p)	Sept. 1979 (r)	Oct. 1979 from Sept. 1979	Oct. 1979 from Oct. 1978	10 months 1979 from 1978	*Unit or Index Base Period*	Oct. 1979 (p)	Sept. 1979 (r)	Oct. 1979 from Sept. 1979	Oct. 1979 from Oct. 1978	10 months 1979 from 1978
GENERAL BUSINESS				%	%	%				%	%	%
• Bank Debits[5, 11]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	*Bil. $ Ex. NY[d, h]*	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Number[12]	*Number*	n.a.	n.a.	n.a.	n.a.	n.a.	*Number*	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Liabilities[12]	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	n.a.	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	n.a
Life Insurance Sales[6]	*1967*	337	285	+ 18	+ 11	+ 18	*1967*	374	309	+ 21	+ 20	+ 17
INCOME												
• Total Personal Income[1, 13]	*Mil. Dol.[d, h]*	95,978	94,955	+ 1	+ 10	+ 11	*Bil. Dol.[d, h]*	1,979	1,960	+ 1	+ 11	+ 12
Salaries & Wages Income[7, 13]	*Mil. Dol.[d, h]*	c	c	+ 2	+ 3	+ 6	*Bil. Dol.[d, h]*	1,257	1,248	+ 1	+ 10	+ 12
Nonagricultural Income[13]		b	b	b	b	b	*Bil. Dol.[d, h]*	1,932	1,913	+ 1	+ 11	+ 12
Employee Earn.—Gross Wkly.: Mfgr.[14, 15]	*Dollars*	329.16	326.27	+ 1	+ 4	+ 6	*Dollars*	274.85	274.04	+ x	+ 7	+ 8
" " Const.[14, 15]	*Dollars*	432.72	436.21	— 1	+ 9	+ 7	*Dollars*	356.82	360.43	— 1	— 3	+ 7
Agr. Income (Cash Mktgs.)[16, 17]	*1957-59*	n.a.	n.a.	n.a.	n.a.	n.a.	*1967*	n.a.	n.a.	n.a.	n.a.	n.a.
EMPLOYMENT & UNEMPLOYMENT												
Civilian Labor Force[14, 15]	*Thousands*	5,122	5,092	+ 1	+ 1	+ 3	*Thousands*	103,939	103,373	+ 1	+ 2	+ 3
Civilian Employment[14, 15]	*Thousands*	4,819	4,815	+ x	— 1	+ 3	*Thousands*	98,158	97,576	+ 1	+ 2	+ 3
Nonagricultural Employment[14, 15]	*Thousands*	4,527	4,528	— x	+ 1	+ 3	*Thousands*	94,691	94,030	+ 1	+ 2	+ 3
Mfg. Prod. Employment[7, 15]	*1967*	79	80	— 2	— 4	— 1	*1967*	106	106	— x	+ 2	+ 3
• Mfg. Prod. Payrolls[7, 15]	*1967*	181	182	— x	— 1	+ 6	*1967*	252.3	253.8	— 1	+ 7	+ 11
Average Weekly Hours—Mfg. Prod.[7, 15]	*Number*	41.3	41.3	— x	— 2	— 1	*Number*	40.2	40.3	— x	— 1	— x
Unemployment, Total—No.[14, 15]	*Thousands*	303	278	+ 9	+ 26	+ 13	*Thousands*	5,781	5,798	— x	+ 6	— 2
Unemployment, Total—Rate[14, 15]	*Percent*	5.9	5.5				*Percent*	5.6	5.6			
Unemployment, Insured[14, 15]	*Thousands*	100	102	— 1	+ 71	+ 23	*Thousands*					
Registered for Work, O.B.E.S.[14]	*Thousands*	341	316	+ 8	+ 1	— 6		b	b	b	b	b
Unemployment Compensation Fund[14]	*Mil. Dol.*	552	561	— 1	+ 32	+ 78		b	b	b	b	b
PRODUCTION												
Gross National Product (Quarterly)[13]		b	b	b	b	b	*Bil. Dol.[d, h]*	n.a.	n.a.	n.a.	n.a.	n.a.
Industrial Production[7, 11]	*1967*	c	c	— 2	— 6	— 2	*1967[d]*	152	152	+ x	+ 2	+ 5
• Steel Production[18]	*Thous. Tons*	1,638	1,662	— 1	— 15	+ 4	*Thous. Tons*	10,810	10,541	+ 3	— 11	+ 2
Electric Power Production[8]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	*Mil. KWH*	n.a.	n.a.	n.a.	n.a.	n.a.
Bituminous Coal Production[19]	*Thous. Tons*	3,369	3,284	+ 3	— 26	+ 1	*Thous. Tons*	75,910	63,895	+ 19	+ 9	+ 22
Pig Iron Production[18]	*Thous. Tons*	1,116	1,156	— 3	— 14	+ 3	*Thous. Tons*	6,779	6,762	+ x	— 13	+ 3
Machine Tools—Shipments[20]		b	b	b	b	b	*Mil. Dol.*	380.05	346.80	+ 10	+ 42	+ 28
Machine Tools—New Orders[20]		b	b	b	b	b	*Mil. Dol.*	565.05	545.60	+ 4	+ 36	+ 34
Durable Goods—New Orders[13]		b	b	b	b	b	*Mil. Dol.[d]*	75,989	77,560	— 2	— 1	+ 12
CONSTRUCTION (Value of Contracts)												
• Total (Seas. Adj.)[9, 21]	*1967[d]*						*1967[d]*					
Total[9, 21]	*1967[f]*	210	238	— 12	— 40	+ 2	*Mil. Dol.*	14,188	13,279	+ 7	— 9	+ 3
Residential Building[9, 21]	*1967[f]*	259	236	+ 10	— 9	— 4	*Mil. Dol.*	6,864	6,248	+ 10	— 3	+ 2
Nonresidential Building[9, 21]	*1967[f]*	192	221	— 13	+ 10	+ 28	*Mil. Dol.*	4,869	4,471	+ 9	+ 14	+ 11
Utilities and Non-Building Const.[9, 21]	*1967[f]*	139	289	— 52	— 86	— 21	*Mil. Dol.*	2,455	2,560	— 4	— 41	— 5
DISTRIBUTION												
Total Retail Sales[2, 13]	*1957-59[d]*	293	275	+ 6	+ 4	+ 5	*Mil. Dol.[d]*	75,620	76,929	— 2	+ 10	+ 11
Department Store Sales[2, 13]	*1957-59[d]*	269	281	— 4	+ 14	+ 8	*Mil. Dol.[d]*	7,422	7,380	+ 1	+ 11	+ 8
• New Passenger Cars Registered[3, 22]	*1967*	123	110	+ 12	— 13	— 8	*No.-49 sts.*	886,778	852,475	+ 4	+ 2	— 4
New Trucks Registered[3, 22]	*No.-42 cos*	6,809	6,216	+ 10	— 16	— 18	*No.-49 sts.*	313,461	293,058	+ 7	+ 3	— 10
Used Cars Registered[3]	*No.-31 cos.*	35,701	27,974	+ 28	— 5	— 8		b	b	b	b	b
PRICES												
• Consumer Price Index[13]:												
All Urban Consumers		b	b	b	b	b	*1967*	225	223	+ 1	+ 12	+ 11
Wage Earners & Clerical Workers		b	b	b	b	b	*1967*	226	224	+ 1	+ 12	+ 11
Producer Price Index[15]:												
All Commodities		b	b	b	b	b	*1967*	245	242	+ 1	+ 14	+ 12
Finished Goods		b	b	b	b	b	*1967*	224	220	+ 1	+ 12	+ 11
Intermediate Materials		b	b	b	b	b	*1967*	255	251	+ 2	+ 15	+ 12
Crude Materials		b	b	b	b	b	*1967*	289	288	+ x	+ 16	+ 18
Sensitive Indus. Commodities[15]		b	b	b	b	b	*1967*	308	297	+ 3	+ 23	+ 28
BANKING AND FINANCE												
• Bank Loans, Large Banks—Total[11]	*Mil. Dol.*	23,404	23,369	+ x	n.a.	n.a.	*Mil. Dol.*	396,251	399,731	— 1	n.a.	n.a.
" " " " Bus. & Agric.[11]	*Mil. Dol.*	8,575	8,523	+ 1	n.a.	n.a.	*Mil. Dol.*	156,555	156,992	— x	n.a.	n.a.
Stock Price Index—400 Indust.[23]		b	b	b	b	b	*1941-43 = 10*	115.7	120.8	— 4	+ 4	+ 7
" " " 40 Utils.[23]		b	b	b	b	b	*1941-43 = 10*	49.0	50.7	— 3	— 7	— 3
" " " 20 Utils.[23]		b	b	b	b	b	*1970 = 10*	14.5	15.7	— 8	— x	+ 4
Yield, Corp. AAA Bonds[23]		b	b	b	b	b	*Percent*	10.11	9.41	+ 7	+ 14	+ 8

• Indicates series charted (page S-1). For sources and footnotes, see page S-6.

Business Conditions in the 8 Largest OHIO CITIES

ITEM	Unit or Index Base Period	Oct. 1979 (p)	Sept. 1979 (r)	Change From Last Year		Oct. 1979 (p)	Sept. 1979 (r)	Change From Last Year		Oct. 1979 (p)	Sept. 1979 (r)	Change From Last Year		Oct. 1979 (p)	Sept. 1979 (r)	Change From Last Year	
				Oct. 1979 from Oct. 1978	10 months 1979 from 1978			Oct. 1979 from Oct. 1978	10 months 1979 from 1978			Oct. 1979 from Oct. 1978	10 months 1979 from 1978			Oct. 1979 from Oct. 1978	10 months 1979 from 1978
		AKRON				**CANTON**				**CINCINNATI**				**CLEVELAND**			
				%	%			%	%			%	%			%	%
Number Employed[7]:																	
Total[w]	*1967*	84	83	— 6	— 6	96	100	— 1	+ 3	88	89	+ x	— 2	91	93	— 4	+ x
Manufacturing	"	61	61	— 8	— 8	86	92	— 4	+ 5	73	73	— 6	— 2	72	76	— 10	— x
Trade, Serv., & Utils.	"	113	111	— 4	— 4	113	114	+ 2	+ 1	103	104	+ 5	— 3	109	110	— x	+ x
Construction	"	78	79	— 9	+ 2	86	87	— 4	+ 1	93	94	+ 4	+ 20	91	91	+ 6	+ 3
Payrolls[7]:																	
Total[w]	"	177	167	+ 1	+ 1	236	247	+ 6	+ 13	218	225	+ 2	+ 7	206	210	— 1	+ 6
• Manufacturing	"	130	121	— 2	— 3	205	219	+ 5	+ 16	177	178	— 9	+ x	155	163	— 11	+ 5
Trade, Serv., & Utils.	"	267	254	+ 5	+ 5	320	325	+ 9	+ 9	269	284	+ 12	+ 11	269	265	+ 7	+ 7
Construction	"	180	173	— 5	+ 5	198	204	+ 7	+ 6	234	240	+ 25	+ 37	236	243	+ 12	+ 10
Emp. Earn.—Gross Wkly.[7]:																	
All Industries[w]	$	317.92	301.36	+ 9	+ 7	322.85	323.29	+ 8	+ 9	283.66	286.92	+ 3	+ 10	349.73	346.66	+ 3	+ 6
Manufacturing	"	369.31	345.67	+ 9	+ 6	351.38	350.25	+ 9	+ 9	329.02	326.02	— 2	+ 4	368.92	366.75	— 1	+ 6
Trade, Serv., & Utils.	"	243.60	236.30	+ 10	+ 10	262.63	265.20	+ 7	+ 8	221.78	230.82	+ 7	+ 18	317.96	311.58	+ 7	+ 7
Construction	"	438.42	416.68	+ 4	+ 3	443.80	447.54	+ 5	+ 5	444.90	451.54	+ 20	+ 13	470.71	491.41	+ 5	+ 6
Retail Sales[2]	%	c	c	+ 4	+ 5	c	c	+ 2	+ 9	c	c	+ 6	+ 7	c	c	— 3	+ 4
Auto Titles[3]:																	
New Cars	*No.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5,375	5,664	— 11	— 7	8,418	6,887	— 12	— 9
New Trucks	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	829	828	— 15	— 14	985	877	— 17	— 12
Retail Food Prices[15]	*1967*	b	b	b	b	b	b	b	b	253	251	+ 10	+ 12	241	240	+ 8	+ 12
Bank Debits[5]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	*No.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	*Thous. $*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	*1967[f]*	152	159	— 6	+ 1	b	b	b	b	b	b	b	b	b	b	b	b
Value of Bldg. Const.[9]:																	
Total	"	261	203	+ 131	+ 15	152	437	+ 25	+ 38	243	119	+ 11	+ 23	111	120	— 6	+ 9
Residential	"	312	239	+ 63	— 7	209	145	+ 20	+ 10	189	108	+ 1	+ 18	110	101	— 37	— 8
Nonresidential	"	210	167	+ 506	+ 63	82	794	+ 44	+ 93	291	129	+ 18	+ 27	112	136	+ 68	+ 25
Steel Production[18]	*1967[g]*	b	b	b	b	b	b	b	b	85	88	— 24	— 6	124	132	— 5	+ 13
Labor Force Estimates[14]:																	
Civilian Labor Force	*Thous.*	244.0	242.4	— 1	+ 2	174.6	172.1	+ 2	+ 4	439.4	436.6	+ 1	+ 2	758.8	756.2	— 1	+ 2
Civilian Employment	"	230.3	228.8	— 1	+ 1	164.5	163.7	+ 1	+ 4	417.8	417.6	+ 1	+ 2	717.0	721.0	— 2	+ 1
Unemp. Total—No.	"	13.7	13.5	+ 15	+ 9	10.1	8.4	+ 23	+ 8	21.6	19.0	+ 4	+ 4	41.8	35.2	+ 28	+ 9
Unemp., Total—Rate	%	5.6	5.6			5.8	4.9			4.9	4.3			5.5	4.7		
		COLUMBUS				**DAYTON**				**TOLEDO**				**YOUNGSTOWN**			
				%	%			%	%			%	%			%	%
Number Employed[7]:																	
Total[w]	*1967*	105	104	— 2	— x	108	108	+ 1	+ 2	102	102	— 3	— x	86	87	— x	+ 2
Manufacturing	"	73	73	— 9	— 7	71	69	— 3	— 1	80	81	— 13	— 6	59	59	+ 1	+ 1
Trade, Serv., & Utils.	"	128	126	— 1	+ 2	161	163	+ 3	+ 5	123	122	+ 3	+ 3	122	123	+ x	+ 2
Construction	"	80	79	+ 12	+ 10	109	110	+ 4	+ 4	93	96	+ 18	+ 12	57	61	— 16	— 5
Payrolls[7]:																	
Total[w]	"	246	239	+ 4	+ 7	221	211	+ 7	+ 8	238	239	— x	+ 5	195	200	+ 8	+ 11
• Manufacturing	"	157	156	— 5	+ 1	162	145	+ 1	+ 6	176	176	— 15	— 3	143	150	+ 9	+ 11
Trade, Serv., & Utils.	"	330	319	+ 6	+ 8	349	346	+ 15	+ 11	327	322	+ 11	+ 11	302	299	+ 9	+ 12
Construction	"	190	185	+ 28	+ 17	232	267	+ 6	+ 10	219	246	+ 16	+ 18	147	160	— 5	+ 9
Emp. Earn.—Gross Wkly.[7]:																	
All Industries[w]	$	277.14	273.73	+ 7	+ 8	362.47	343.31	+ 7	+ 8	328.82	328.03	+ 3	+ 6	310.10	320.77	+ 7	+ 10
Manufacturing	"	330.74	328.35	+ 7	+ 10	408.69	373.39	+ 5	+ 7	365.47	362.28	— 2	+ 5	345.21	367.52	+ 6	+ 9
Trade, Serv., & Utils.	"	229.76	226.03	+ 6	+ 7	294.22	288.93	+ 12	+ 9	278.90	275.76	+ 11	+ 9	245.46	243.31	+ 8	+ 9
Construction	"	394.34	388.60	+ 13	+ 4	377.94	434.31	+ 2	+ 7	460.25	502.40	— 4	+ 3	474.20	478.11	+ 11	+ 13
Retail Sales[2]	%	c	c	+ x	+ 3	n.a.	n.a.	n.a.	n.a.	c	c	+ 1	+ 1	c	c	+ 10	+ 4
Auto Titles[3]:																	
New Cars	*No.*	4,748	3,913	— 9	— 6	3,216	2,786	— 25	— 15	2,203	2,073	— 18	n.a.	1,365	1,250	— 10	— 1
New Trucks	"	966	951	+ 12	— 12	468	360	— 32	— 27	465	451	— 28	n.a.	226	253	— 23	+ 1
Retail Food Prices[15]	*1967*	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
Bank Debits[5]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	*No.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	*Thous. $*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	*1967[f]*	b	b	b	b	b	b	b	b	154	147	— 8	— 1	87	91	— 6	+ 6
Value of Bldg. Const.[9]:																	
Total	"	215	227	— 16	+ 32	127	177	+ 2	+ 27	232	165	— 41	+ 37	277	224	+ 98	+ 3
Residential	"	215	243	+ 13	+ 22	163	71	+ 3	+ 21	197	147	— 55	— 9	234	199	+ 12	— 15
Nonresidential	"	215	210	— 33	+ 41	81	310	+ 1	+ 35	250	175	— 32	+ 96	328	255	+ 449	+ 32
Steel Production[18]	*1967[g]*	b	b	b	b	b	b	b	b	b	b	b	b	79	82	— 13	+ 2
Labor Force Estimates[14]:																	
Civilian Labor Force	*Thous.*	445.3	439.4	+ 1	+ 5	278.4	275.9	+ 2	+ 4	228.7	225.8	— 6	— 5	133.0	133.2	— 1	+ 2
Civilian Employment	"	424.9	420.2	+ x	+ 5	260.1	255.8	— 1	+ 2	212.6	210.0	— 8	— 5	124.4	124.7	— 1	+ 4
Unemp. Total—No.	"	20.4	19.2	+ 9	+ 7	18.3	20.2	+ 58	+ 52	16.1	15.8	+ 21	+ 6	8.6	8.5	— 1	— 12
Unemp., Total—Rate	%	4.6	4.4			6.6	7.3			7.1	7.0			6.5	6.3		

NOTE: All data are for county areas except bank debits and commercial failures, which are for areas within city limits. The indexes of number employed and payrolls and the employee weekly earnings are based on data for production workers in manufacturing, construction workers in contract construction, and nonsupervisory employees in other categories which exclude agriculture, government, education, and public institutions.

• Indicates series charted (page S-3). For sources and footnotes, see page S-6.

Number Employed, Payrolls, and Man-Hours in Ohio Industry

INDUSTRIAL GROUP	NUMBER EMPLOYED[7]					PAYROLLS[7]					MAN-HOURS[7]				
	Index (1967 = 100)		Change			Index (1967 = 100)		Change			Index (1967 = 100)		Change		
	Oct. 1979 (p)	Sept. 1979 (r)	Oct. 1979 from Sept. 1979	Oct. 1979 from Oct. 1978	10 months 1979 from 1978	Oct. 1979 (r)	Sept. 1979 (p)	Oct. 1979 from Sept. 1979	Oct. 1979 from Oct. 1978	10 months 1979 from 1978	Oct. 1979 (p)	Sept. 1979 (r)	Oct. 1979 from Sept. 1979	Oct. 1979 from Oct. 1978	10 months 1979 from 1978
			%	%	%			%	%	%			%	%	%
Total[w] (2,427)[a]	**90**	**91**	**+ 1**	**— 2**	**+ x**	**201**	**201**	**— x**	**+ 3**	**+ 7**	**87**	**88**	**— 1**	**— 2**	**— x**
All Manufacturing[w] (1,318)	**79**	**80**	**— 2**	**— 4**	**— 1**	**181**	**182**	**— x**	**— 1**	**+ 6**	**74**	**75**	**— 2**	**— 6**	**— 2**
Chemicals (69)	97	99	— 1	— 1	+ x	215	218	— 1	+ 3	+ 8	95	96	— 1	— 2	+ 1
Food Products (90)	83	88	— 5	— x	— 2	204	211	— 3	+ 12	+ 5	76	82	— 7	+ 2	— 3
Bakery	75	76	— 1	+ 8	— 3	177	179	— 1	+ 17	+ 6	73	73	+ x	+ 11	— 3
Miscellaneous	84	89	— 6	— 1	— 1	207	214	— 4	+ 12	+ 5	76	82	— 8	+ 1	— 3
Lumber Products (46)	94	94	— x	— 8	— 1	188	189	— 1	— 1	+ 6	85	86	— 1	— 9	— 2
Furniture	102	101	+ x	— 10	— 2	203	203	— x	— 3	+ 4	97	97	+ x	— 11	— 3
Miscellaneous	82	84	— 2	— 3	+ 4	167	169	— 1	+ 3	+ 12	68	70	— 4	— 6	+ 2
Machinery (307)	77	77	— x	+ 3	+ 1	169	165	+ 2	+ 13	+ 9	74	73	+ 1	+ 3	+ x
Elec. Mach., Apparatus and Supplies	85	85	— x	+ 2	+ x	196	193	+ 1	+ 14	+ 7	81	81	+ x	+ 4	— 1
Machine Tools	61	66	— 7	+ 4	+ 5	142	148	— 4	+ 14	+ 16	64	67	— 5	+ 4	+ 5
Agricultural Equipment	47	49	— 4	+ 4	+ 5	104	106	— 2	+ 14	+ 16	53	54	— 3	+ 2	+ 6
Special Machinery and Appliances	74	72	+ 2	+ 4	+ 1	152	143	+ 6	+ 12	+ 9	70	67	+ 4	+ 2	+ 1
Metal Products (357)	84	86	— 2	— 7	— x	189	195	— 3	— 6	+ 6	75	78	— 4	— 11	— 2
Foundry Products and Drop Forgings	76	94	— 19	— 29	— 6	178	223	— 20	— 33	— 2	62	77	— 19	— 32	— 8
Pipes, Valves, and Plumbers' Supplies	66	82	— 20	— 23	+ 9	157	204	— 23	— 21	+ 12	76	93	— 18	— 22	+ 5
Screw Machine Products and Hdwe.	95	94	+ 1	— 2	+ 2	180	171	+ 5	— 4	+ 3	95	94	+ 1	— 7	— 3
Sheet Metal Work	95	92	+ 3	— 10	— 3	213	204	+ 5	— 5	— 1	81	79	+ 3	— 11	— 8
Steel Works and Rolling Mills	78	80	— 3	— 3	+ 1	172	185	— 8	— x	+ 10	71	76	— 6	— 7	+ 1
Stoves and Furnaces	92	96	— 4	— 23	— 7	185	191	— 3	— 18	+ x	98	101	— 3	— 25	— 9
Miscellaneous	85	82	+ 4	+ 1	+ 1	190	178	+ 7	+ 4	+ 9	72	69	+ 4	— 3	+ 1
Paper and Printing (141)	66	67	— 1	— 3	— 2	166	170	— 3	+ 2	+ 3	63	65	— 3	— 6	— 4
Paper and Pulp	49	49	— x	— 3	— 4	160	167	— 4	+ 5	+ 2	41	44	— 6	— 4	— 7
Printing and Publishing	79	80	— 1	— 2	— 2	180	181	— 1	+ 5	+ 5	74	75	— 1	+ x	— 1
Miscellaneous	67	68	— 1	— 4	— 2	157	161	— 3	— 1	+ 2	67	69	— 3	— 8	— 4
Rubber Products (55)	69	69	+ x	— 5	— 5	168	158	+ 6	— 1	+ 4	64	63	+ 1	— 7	— 5
Tires and Tubes	50	50	+ x	— 5	— 8	109	106	+ 3	+ x	+ 2	38	37	+ 1	— 7	— 7
Miscellaneous	80	79	+ x	— 6	— 4	216	200	+ 8	— 1	+ 5	87	86	+ 2	— 6	— 4
Stone, Clay, and Glass Products (94)	75	76	— 1	— 7	— 4	188	183	+ 3	— 2	+ 1	84	83	+ 1	— 8	— 6
Brick and Tile	59	61	— 3	— 4	+ 13	124	121	+ 3	+ 8	+ 25	62	61	+ 1	— x	+ 16
Glass	78	79	— x	— 15	— 11	185	174	+ 6	— 11	— 7	80	78	+ 2	— 16	— 14
Vitreous & Semi-Vit. China & Pottery	58	57	+ 1	+ x	— 1	161	158	+ 1	+ 9	+ 8	88	86	+ 2	+ 1	— 2
Miscellaneous	91	93	— 3	+ 4	+ 3	237	245	— 3	+ 9	+ 8	98	101	— 3	+ 2	+ 3
Textiles (37)	73	72	+ 1	— 3	— 1	115	108	+ 6	+ 4	+ 7	74	74	+ x	— 2	+ 1
Men's Clothing	82	83	— 1	— 2	— 2	114	111	+ 3	+ 5	+ 8	76	81	— 6	+ 1	+ 5
Miscellaneous	69	67	+ 3	— 4	— x	120	110	+ 9	+ 2	+ 6	73	70	+ 5	— 4	— 1
Vehicles (62)	84	87	— 4	— 11	— 1	196	202	— 3	— 19	+ 2	74	77	— 4	— 20	— 5
Autos and Parts	93	98	— 5	— 15	— 1	224	233	— 4	— 24	+ 1	81	85	— 5	— 25	— 7
Cars, Electric and Steam Railway	119	119	+ x	+ 15	+ 15	257	268	— 4	+ 18	+ 26	109	113	— 4	+ 16	+ 20
Miscellaneous	57	56	+ 1	+ 27	— x	126	123	+ 2	+ 39	+ 9	58	57	+ 1	+ 26	+ 2
Miscellaneous Manufacturing (60)	65	65	+ x	— 3	— 2	144	129	+ 11	+ 8	+ 6	62	57	+ 8	— 2	— 2
Total Trade, Service, and Utilities[w] (727)	**104**	**103**	**+ 1**	**+ x**	**— x**	**234**	**232**	**+ 1**	**+ 8**	**+ 7**	**107**	**107**	**+ x**	**+ 1**	**+ 1**
Service (214)	122	122	— x	+ 3	+ 3	242	244	— 1	+ 9	+ 8	134	136	— 1	+ 4	+ 3
Trade, Retail and Wholesale (403)	93	92	+ 1	— 2	— 2	205	202	+ 2	+ 5	+ 6	92	91	+ 1	— 2	— 2
Transportation & Public Utilities (110)	109	109	— x	+ x	+ 2	302	295	+ 3	+ 11	+ 9	109	108	+ 1	+ 1	+ 2
Construction (352)	**80**	**81**	**— 1**	**+ 3**	**+ 6**	**192**	**202**	**— 5**	**+ 11**	**+ 13**	**71**	**74**	**— 4**	**+ 4**	**+ 7**
Mines and Quarries (30)	**128**	**129**	**— x**	**+ 1**	**+ 30**	**270**	**268**	**+ 1**	**+ 15**	**+ 49**	**80**	**78**	**+ 3**	**+ 7**	**+ 35**

Indexes of number employed and of payrolls are based on the employment of 532,968 persons (production workers in manufacturing and mining, construction workers in contract construction, and nonsupervisory employees in other categories in 2,427 firms; indexes of man-hours, on the employment of 519,296 production workers and nonsupervisory employees in 2,326 firms. Figures in parentheses show number of firms reporting employment and payrolls. In some cases fewer firms report man-hours. Data do not include agriculture, government, education, or public institutions. For sources and footnotes, see below.

FOOTNOTES FOR BULLETIN TABLES AND CHARTS

[†]Change in number of failures: [a]Figures in parentheses show number of firms reporting this month: [n.a]Current data not available: [b]Comparable data not available: [c]Only percentage of change available: [d]Adjusted for seasonal change; [f]Adjusted for number of working days: [g]Four weeks average: [h]Annual rate; [p]Preliminary: [r]Revised: [s]Series revised: [w]Weighted: [x]Less than 0.5 percent; [y]More than 1,000 percent increase.

Primary Sources:

Computed from: [1]Center for Business and Economic Research multiple regression model.

Computed from original data collected by the Center for Business and Economic Research from: [2]Ohio retailers: [3]County Clerks of Courts: [4]Local Power and Light Companies.

Computed by the Center for Business and Economic Research from data supplied by: [5]Board of Governors of the Federal Reserve System: [6]Life Insurance Marketing and Research Association; [7]Division of Research and Statistics of the Ohio Bureau of Employment Services, collected in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor; [8]Federal Power Commission; [9]F. W. Dodge Division, McGraw-Hill Information Systems Company; [10]Dun & Bradstreet, Inc.

Other data sources: [11]Federal Reserve Board; [12]Dun & Bradstreet, Inc.; [13]U.S. Department of Commerce; [14]Division of Research and Statistics of the Ohio Bureau of Employment Services; [15]U.S. Department of Labor; [16]Department of Agricultural Economics, O.S.U.; [17]U.S. Department of Agriculture; [18]American Iron and Steel Institute; [19]U.S. Department of Energy; [20]National Machine Tool Builders' Association; [21]F. W. Dodge Division, McGraw-Hill Information Systems Company; [22]R. L. Polk & Co.; [23]Standard & Poor's Corporation.

Note: In the Ohio-U.S. table, page S-2, dual source notes on a single line of the table stub refer first to Ohio data, second to U.S. data.

Ohio Retail Sales Trends

October Sales of Ohio Retailers were 13 percent higher than September sales and 4 percent higher than sales in October 1978. On a seasonally adjusted basis, the current October index of sales was 6 percent above the September sales index.

For the First Ten Months of 1979, total retail sales maintained a level 5 percent above cumulative sales in the corresponding months of 1978.

By Kind of Business, rebounds from September declines were evident as 19 out of 23 categories had sales gains in October over September. The much-watched motor vehicles category had a sales increase of 19 percent in October from September. Even so, vehicle sales failed by 4 percent to match the year-ago October level. Seven other lines also experienced sales declines in October from year-ago October. For the year thus far, sales in 18 individual lines surpassed their sales in the first 10 months of 1978.

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INDEXES OF OHIO RETAIL SALES

KIND OF BUSINESS	INDEX (1957-59 = 100)		CHANGE			
			Oct. 1979 from Sept. 1979		Oct. 1979 from Oct. 1978	10 mos. 1979 from 1978
	Oct. 1979 (p)	Sept. 1979 (r)	Not Seas. Adj.	Seas. Adj.		
			%	%	%	%
Total Retail Stores[2, w]	**305**	**270**	**+13**	**+ 6**	**+ 4**	**+ 5**
Grocery Stores	301	292	+ 3	+ 1	+ 7	+ 6
Other Food Stores	413	329	+26	+21	+28	+14
General Stores (With Food)	170	178	— 5	— 8	+12	+18
Department Stores	282	271	+ 4	— 4	+14	+ 8
Other General Merchandise	215	204	+ 6	— 2	+ 8	+ 8
Men's Clothing-Furns. Stores	128	101	+27	+ x	—10	— 2
Family Clothing Stores	151	116	+29	+17	+ 6	+ 4
Women's Ready-to-Wear Stores	156	151	+ 3	— x	+ 3	+ 3
Shoe Stores	126	149	—16	—10	— 7	+ 2
Furniture Stores	251	216	+16	+ 8	+ 3	+ 8
Household Appl.-TV-Rdio Strs.	248	260	— 4	— 3	—18	— 1
Home Furnishings Stores	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Motor Vehicle Dealers	392	329	+19	+11	— 4	— 3
Other Automotive	159	133	+19	+12	+ 4	— 1
Filling Stations	432	356	+21	+10	+ 5	+11
Lumber-Bldg. Matls. Dealers	345	314	+10	+ 8	— 7	+ x
Paint, Glass & Wallpaper Strs.	154	203	—24	—18	— 9	+11
Heat.-Plumb. & Elec. Sup. Strs.	288	286	+ 1	—16	+ 9	+23
Hardware Stores	252	208	+21	+21	— 5	— x
Farm Equipment Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Eating & Drinking Places	225	207	+ 9	+ 3	+18	+16
Drug Stores	224	210	+ 6	+ 1	+ 2	+ 5
Jewelry Stores	173	162	+ 6	+ x	+17	+ 7
Florists	161	120	+34	+19	+10	+15
Fuel Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hay-Feed, Farm & Grdn. Strs.	378	244	+55	+17	— 5	+16
State Liquor Stores	164	154	+ 7	+ 6	+ 9	+ 5

For sources and footnotes, see page S-6.

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SOLOMON, LARRY K., and H. LEE MATHEWS, "Identifying the Midwestern Traveler," (May) 5-7.

WEST, JAWES S., and MICHAEL M. PEARSON, "Wholesaling in Economic Development: Incorporating the Distribution-Center Concept," (August) 1-5.

Commercial Banking and the Economic Development of Ohio and Columbus

(Continued from page 4)

and less willing to expand their assets and liabilities than banks elsewhere? A major reason is their inclination, either by intent or by default, toward risk aversion, which translates into a lack of aggressiveness in generating business loans. The gross weakness of Ohio commercial banks lies in making commercial loans. A few years ago in Cleveland there were eleven production loan offices of out-of-state banks. How many Ohio banks have out-of-state production loan offices? The answer, I surmised, is very few, if any.

Ohio banks often excuse themselves for their weak commercial loan activity on the basis of the size of their deposits, especially liabilities. But "size of deposits" is a measure of a bank's willingness to tap sources of funds for expanding their deposit base for making loans. Ohio banks are generally not very aggressive in acquiring funds.

In examining the propensity of Ohio's banks to risk aversion, it is meaningful to review how the strength of a bank is measured. The following key ratios are generally used for this purpose:

1. percent earned on average assets
2. percent earned on average equity
3. percent of average equity to average assets
4. net interest margins
5. overhead cost ratio

Of these ratios, the most important one according to bank stock analysts is the first one, percent earned on average assets (*New York Times* 1979). This ratio is also an indication of a bank's inclination to risk aversion. The higher the ratio, the greater is the propensity to risk aversion. The two top banks in the U.S. having the highest percent earned on average assets are two Cleveland banks, National City (1.30 percent) and AmeriTrust, formerly Cleveland Trust, (1.09 percent) (*Finance Magazine*, 1978). In fact, National City was the only bank among the top 60 U.S. banks to make it into the top ten in all of the above five categories. Furthermore, AmeriTrust was the only bank, aside from National City Bank, among the top 60 U.S. banks to make it into the top ten in four of the above categories. The extreme performance of National City, the so called "Superbank," reflects a deliberate asset-liability decision to place a large amount of their assets into fixed-income securities. This amount, $1.2 billion, is virtually as large as the bank's entire loan portfolio (Elliott 1978). This ultraconservative decision to pervasive risk aversion helps explain why National City is able to achieve such high performance ratios.[4]

Another reason for the peculiar behavior of Ohio's banks was pointed out to me by a banker associated with one of Ohio's largest banks. He feels that "discount window" policies of the Federal Reserve Bank in Cleveland are too conservative and restrictive compared to other regional Federal Reserve Banks, e.g. Chicago and New York. He has argued that the high discount rate of the Cleveland Fed, and the traditionally curtailed availability of credit from the Cleveland Fed, has militated against the expansion of the deposits of Ohio banks.

A Summary of Commercial Banking in Columbus

Much of what has been said for Ohio holds true for Columbus. However, there are some major differences. The economy of the Columbus SMSA has been growing faster than either the Ohio or U.S. economy. Despite this faster growth the participation of the commercial banks in the local economy appears to be slipping at the expense of the S&Ls. If Ohio's commercial banks play a smaller role in the Ohio economy than do U.S. banks in the U.S. economy, banks in Columbus play an even smaller role in the economy of Columbus. The earlier explanations of the behavior of Ohio banks also hold for Columbus. Another reason for the smaller role of Columbus banks is that the large number of insurance companies in the city provide a source of loanable funds for businesses in the city.

Two of the major banks (Bank One and Huntington) have grown rapidly, but so has the Columbus economy. Columbus banks have a reputation (especially Bank One) for introducing innovative marketing practices.[5]

The suburbanization of population and firms in the Columbus SMSA has raised questions about the future economic vitality of the Columbus central business district (CBD). For example what is the future of the Columbus CBD as the financial center of central Ohio? In a study by Bies (1977) the spatial distribution of deposits at metropolitan bank offices was analyzed. CBDs have been the center of urban banking activity primarily because of agglomeration economies. However, these economies appear to be diminishing because of modern transportation facilities, higher incomes, spatial dispersal of new manufacturing plants, and improved communication technologies—e.g., electronic transfer of funds. Furthermore, when selecting a new bank, households are more likely to choose a bank near their home than near their workplace.

Because the major strengths of the Columbus banks lie in the servicing of consumers and small businesses and less in servicing sizeable commercial accounts, there is likely to be a greater spatial dispersion of facilities from the CBD. On the other hand were the Columbus banks essentially oriented to large commercial accounts here and elsewhere, then the financial core of the CBD would grow faster in relative terms.

(Continued on page 6)

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[4] All of this is reminiscent of the behavior of Boston banks in the first half of the 19th century. They held large amounts of trust funds in safe secure fixed income securities, and relatively little in commercial loans. The unwillingness of Boston banks to help finance the economic redevelopment of the Boston economy is cited as a reason for the stagnation of Boston's economy in this period. There are parallels for today's Cleveland economy.

[5] Bank One has acquired a national reputation for instituting a number of financial services involving the computer, e.g., regional processing of Master Charge credit card accounts, and the financial management of the unencumbered cash accounts of customers of Merrill Lynch, et al.

Commercial Banking and the Economic Development of Ohio and Columbus

(Continued from page 5)

The banks in Columbus are minor regional ones for the reason that most of their sources and uses of funds are associated with Columbus and central Ohio. Columbus is not a major regional "money center" like Chicago or Pittsburgh and its involvement in the Eurodollar and other world capital markets is virtually non-existent. The same can be said for the banks in Cincinnati, Cleveland, and Toledo. None of these cities is a major regional money center; and the size of the deposits of each of the major banks in these cities is small relative to the size of the urban economy served by the bank.

State and Local Taxation of Commercial Banks

Taxation of Ohio banks imposes a cost of doing business which may affect their behavior toward the economic development of Ohio. For example, if the taxes paid by Ohio banks are burdensome, do they adjust to this burden by being more cautious about risk? In taxing commercial banks and other financial institutions Ohio has generally relied on the intangible personal property taxes upon deposits and shares of stock. In a recent comprehensive study, Harris stated that Ohio banks "bear a heavy tax burden relative to most other states, although even with the deposits and shares taxes treated as bank taxes, Ohio banks are taxed relatively lightly among Ohio corporations" (Harris 1979, p. 118). The main conclusion of Harris' study is that deposits and shares taxes can be regarded as taxes incident on banks. He also found that:

> Ohio bank taxes are indeed relatively high . . . Nationally, Ohio ranked in the top five or ten states in 1969; in the North Central region, Ohio ranked first or second, depending upon the basis used for comparison, and was higher than any of the neighboring states. (p. 71)

If such taxes are burdensome, they may drive banking capital out-of-the-state and impede economic development in Ohio. Whether this is indeed so is problematical. Comparing Ohio banks to other businesses in Ohio, banks enjoy a number of tax advantages which other businesses do not. According to Harris (1979, p. 87) the tax impact ratio for Ohio banks was 64.4 percent of the average for Ohio corporations in 1969.

Are the tax burdens of commercial banks too cumbersome for purposes of economic development? Can the taxes banks pay be changed in such a way that they would be more mindful of promoting economic development in the areas they serve? My answer to both questions is no, for the reason that there are more important ways for banks to promote economic development.

The Regional Effects of U.S. Monetary Policy

If commercial banks are the major institution for creating money to finance the economic development of Ohio, and if there are pronounced regional effects of U.S. monetary policy, then the interaction of Ohio banks with changes in U.S. monetary policy is worth a review.

There is a small but growing interest in the regional impact of U.S. monetary policy, e.g., Fishkind (1977). For Ohio and Columbus it means understanding how U.S. monetary policy affects behavior of the Federal Reserve Bank of Cleveland in respect to member banks in the district.

One of the earliest studies of the regional impact of U.S. monetary policy was conducted by Lawrence (1964) who found that banks making primarily commercial loans experience the greatest decline in reserve positions during periods of monetary restraint. If this is indeed the case, then Ohio banks would experience a relatively smaller decline than banks outside Ohio.

Interest rate differences across regions are cited by Roberts and Fishkind (1979) and Longbrake and Peterson (1979). Miller (1978) concludes for his two-region model "that the regional dimension may disrupt the intended short-run impact of defensive open market operations by the central bank" (Miller 1978, p. 137).[6]

Several papers (Miller 1978, p. 1) have analyzed the reserve adjustment lags of various bank classes and regions in the U.S. with respect to open market operations, and concluded that one to two months impact of open market purchases is pervasive among all bank classes and regions in the U.S.

The Future Role of Commercial Banks in the Economic Development of Coumbus

Commercial banks in Columbus need to learn more about their importance and the potential role they can play in the economic development of the city. In fact Barry Winslow, a senior vice president of the Huntington National Bank, concludes that:

> Regional banks cannot afford to maintain a passive role or low profile in area economic development efforts. They must assume an active, catalytic role in economic development.
>
> In order to be effective in this active, aggressive role in the economic development, the regional bank must be knowledgeable, innovative, and well connected in the national and international markets. In fact it must assume a quasi-investment banking role; acting as a financial consultant, venture capital reference, private placement underwriter, and liason between the public and private sectors of the economy (Winslow 1979, p. 143).

Winslow provides an answer to the question of how to make a regional commercial bank more conscious of the processes of local economic development. He outlines an operational framework for establishing an economic development program within a bank. Winslow is well aware that "banks can play an important role as a catalyst to economic development" (Winslow 1979, p. 12).

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[6] However, contrary evidence is offered in an earlier study (Dreese 1974).

The most widely used form of economic development financing is industrial revenue bond financing. There is an extensive discussion in Winslow (1979) about this development tool as well as other financial investments for promoting economic development.

Summary and Recommendations

Commercial banking in Ohio and Columbus is a vital and integral part of the economic development of both areas. However, the expansion of the demand for the services of commercial banks in Ohio and Columbus has been largely a reflection of the economic growth in the nonfinancial sectors of the Columbus and Ohio economies.

In the case of Columbus this means that commercial banks in Columbus have not contributed to the Columbus economy to the extent of their internal potential growth. They have relied largely on the growth of the other sectors of the Columbus economy, and not on their internal ability to grow as banks have in the important regional money centers. Columbus is not a regional money center like Pittsburgh and Chicago, cities which export a considerable amount of financial services to other areas. The growth of the Chicago and Pittsburgh economies has been bolstered by the expansion of exported banking services. It is my belief that Columbus and Central Ohio import more banking services than they export. If Columbus were to export such services, rather than import them, the economic development of Central Ohio would be additionally enhanced.

Furthermore, it can be argued that the growth of commercial banking in Columbus has taken a back seat to the growth of financial deposits in S&Ls and credit unions in the city. In Ohio there are cities where the commercial banking industry is relatively stronger than the S&Ls and credit unions. In Columbus the reverse is true. Banks in Columbus cannot excuse themselves because of "Regulation Q" for which there exist counter examples of relative strength in other cities in Ohio. This trend of a smaller share of financial deposits accruing to commercial banks in Columbus has a special signifiance for the economic development of Columbus. Commercial banks have a far greater capacity to export financial services than either S&Ls or credit unions. This capacity, ill developed in Columbus, is shrinking in relative terms for the Columbus banks. Furthermore, because of the flexibility of the operations of a bank there is the potential loss of benefits accruing to the community due to the relative smaller size of banks in Columbus.

In general, the economic development of Ohio has been impeded by the conservative stance of Ohio banks with respect to policies regarding the expansion of their assets and liabilities. Compared to banks in other states they are dedicated risk averters, particularly with respect to commercial lending. They have been content to pursue safe, secure, and ultraconservative policies. Moreover, they have not been as development minded in creating regional money centers as banks have been in Pittsburgh and Chicago. The assets of the large banks in Cincinnati and Cleveland are small relative to the size of their urban economies. Columbus is no exception. And finally, they are "Johnny-come-latelys" to understanding the role that they should play in promoting the economic development of the areas they serve.

The recent changes in state banking laws (Campbell 1979) may help, but it will take a stronger, more dynamic leadership in banking to create regional money centers which will add significantly to the urban economies of Ohio, including Columbus. Furthermore, if they are truly interested in furthering the economic development of Ohio and Columbus, then they will have to face up to the challenge of helping to create and nourish capital venture firms in Ohio.

The Federal Glass Company closing also underscores another concern about commercial banking in Columbus. In many cities banks are willing to cooperate in order to share the risk of making a large loan to a firm having a vital stake in the urban economy.[7] The "Catch-22" aspects of the Federal Glass case exposed the unwillingness of the banks in Columbus to pool the risk of a loan with possible public guarantees. While it can be argued that Federal Glass was a lost cause from the start, the need for the banks in Columbus to consider working together when a similar case arises is paramount.

My recommendations are the following:

1. Financial institutions, especially Ohio banks, and the Cleveland Fed need to learn more about how to promote the economic development of their communities.
2. Ohio banks need to remedy a number of marketing deficiencies, and take a more expansive view of their role to promote business in the communities they serve. These marketing deficiencies are obvious in areas, e.g., Columbus, where S&Ls are so much stronger than banks.
3. Ohio banks need to be more aggressive in acquiring funds and especially in soliciting commercial loans.
4. Ohio banks need to reexamine their ultraconservative stance to risk, and become more risk seeking and less risk averting.
5. Ohio banks need to wake up to their social responsibility for and mission of helping promote the economic development of Ohio,[8] now that statewide branch

(Continued on page 8)

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[7] The willingness of the Columbus banks to cooperate on other matters was evident in making a loan of $5 million to the financially beleaguered Columbus school system. The banks are Huntington, Bank One, and BancOhio National (*Lantern* 1979).

[8] There will undoubtedly be a push in this direction coming from the recently enacted Community Reinvestment Act which states that banks may be penalized for not supporting the economic base of the region they serve. The Act became effective on November 6, 1978. A further awareness of the need for economic development by banks is expressed by the recently created economic development committee of the Ohio Bankers Association. The guiding hand behind the creation of this committee was Frank Wobst, President of the Huntington National Bank, Columbus.

Commercial Banking and the Economic Development of Ohio and Columbus

(Continued from page 7)

banking on a contiguous county basis is permitted (Campbell 1979) and the Community Reinvestment Act (U.S. Congress 1977) is on the books. In other words a financial economic development program is needed to complement the programs proposed in L'Esperance (1977) and L'Esperance and Hunker (1979).

In conclusion, Ohio banks will have to decide whether they want to continue operating the way they have or assume a more expansive role as significant regional banks. Regardless of what they do, Ohio banks will face more competition from foreign and major money center banks, from S&Ls and credit unions trying to become more like commercial banks, and from the largest U.S. banks should U.S. regional branch banking be permitted.

In my opinion, Ohio banks ought to be more dynamic and expansive in the creation of their assets and liabilities. Were they to do so, the Ohio economy would be in better shape today.

WILFORD L. L'ESPERANCE *is Professor, Department of Economics, The Ohio State University. This article is based on a discussion paper prepared for the Mayor's Economic Development Council, Department of Development, City of Columbus. The opinions expressed in this paper are those of the author and are not necessarily those of the Council, the Technical Advisory Group (TAG) of the Mayor's Economic Development Council, or the Department of Development. The author, a member of TAG, is grateful to* **HENRY L. HUNKER, KARL CASE, MICHAEL N. CLEMMONS,** *and* **FREDERICK A. DEAL** *for their helpful comments and discussion of the issues.*

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BULLETIN OF BUSINESS RESEARCH

STATISTICAL SUMMARY

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The Ohio State University

Volume LV, Number 1 • January 1980

Business Conditions in Ohio and the United States

ITEM	OHIO						UNITED STATES					
				CHANGE FROM						CHANGE FROM		
		Nov. 1979	Oct. 1979	Last Month	Last Year			Nov. 1979	Oct. 1979	Last Month	Last Year	
	Unit or Index Base Period	(p)	(r)	Nov. 1979 from Oct. 1979	Nov. 1979 from Nov. 1978	11 months 1979 from 1978	*Unit or Index Base Period*	(p)	(r)	Nov. 1979 from Oct. 1979	Nov. 1979 from Nov. 1978	11 months 1979 from 1978
GENERAL BUSINESS				%	%	%				%	%	%
• Bank Debits[5, 11]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	*Bil. $ Ex.NY[d, h]*	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Number[12]	*Number*	n.a.	n.a.	n.a.	n.a.	n.a.	*Number*	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures Liabilities[12]	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	n.a.	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	n.a.
Life Insurance Sales[6]	*1967*	323	337	— 4	+ 12	+ 17	*1967*	350	374	— 6	+ 16	+ 16
INCOME												
• Total Personal Income[1, 13]	*Mil. Dol.[d, h]*	96,765	95,978	+ 1	+ 9	+ 11	*Bil. Dol.[d, h]*	2,000	1,979	+ 1	+ 11	+ 12
Salaries & Wages Income[7, 13]	*Mil. Dol.[d, h]*	c	c	— x	+ 1	+ 6	*Bil. Dol.[d, h]*	1,270	1,257	+ 1	+ 10	+ 11
Nonagricultural Income[13]		b	b	b	b	b	*Bil. Dol.[d, h]*	1,952	1,932	+ 1	+ 11	+ 12
Employee Earn.—Gross Wkly.: Mfg.[14, 15]	*Dollars*	329.19	329.16	+ x	+ 2	+ 6	*Dollars*	275.37	274.85	+ x	+ 6	+ 8
" " Const.[14, 15]	*Dollars*	441.96	432.72	+ 2	+ 9	+ 7	*Dollars*	346.39	356.82	— 3	+ 7	+ 7
Agr. Income (Cash Mktgs.)[16, 17]	*1957–59*						*1967*					
EMPLOYMENT & UNEMPLOYMENT												
Civilian Labor Force[14, 15]	*Thousands*	5,098	5,122	— x	+ x	+ 3	*Thousands*	103,719	103,939	— x	+ 2	+ 3
Civilian Employment[14, 15]	*Thousands*	4,829	4,819	+ x	— x	+ 2	*Thousands*	97,943	98,158	— x	+ 2	+ 3
Nonagricultural Employment[14, 15]	*Thousands*	4,522	4,527	— x	+ 1	+ 3	*Thousands*	94,686	94,691	— x	+ 2	+ 3
Mfg. Prod. Employment[7, 15]	*1967*	78	79	— 1	— 6	— 1	*1967*	105	105	— 1	+ x	+ 2
• Mfg. Prod. Payrolls[7, 15]	*1967*	178	181	— 2	— 5	+ 5	*1967*	252	253	+ x	+ 6	+ 10
Average Weekly Hours—Mfgr. Prod.[7, 15]	*Number*	41.2	41.3	— x	— 3	— 1	*Number*	40.2	40.3	— x	— 1	— 1
Unemployment, Total—No.[14, 15]	*Thousands*	269	303	— 11	+ 8	+ 12	*Thousands*	5,776	5,781	— x	+ 3	— 2
Unemployment, Total—Rate[14, 15]	*Percent*	5.3	5.9				*Percent*	5.6	5.6			
Unemployment, Insured[14, 15]	*Thousands*	115	100	+ 15	+ 77	+ 26	*Thousands*					
Registered for Work, O.B.E.S.[14]	*Thousands*	334	341	— 2	+ 2	— 5		b	b	b	b	b
Unemployment Compensation Fund[14]	*Mil. Dol.*	556	552	+ 1	+ 20	+ 69		b	b	b	b	b
PRODUCTION												
Gross National Product (Quarterly)[13]		b	b	b	b	b	*Bil. Dol.[d, h]*	n.a.	n.a.	n.a.	n.a.	n.a.
Industrial Production[7, 11]	*1967*	c	c	— 2	— 9	— 3	*1967[d]*	152	152	— x	+ 1	+ 4
• Steel Production[18]	*Thous. Tons*	1,437	1,638	— 12	— 24	+ 2	*Thous. Tons*	9,997	10,810	— 8	— 14	+ 1
Electric Power Production[8]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	*Mil. KWH*	n.a.	n.a.	n.a.	n.a.	n.a.
Bituminous Coal Production[19]	*Thous. Tons*	3,915	3,369	+ 16	— 12	— x	*Thous. Tons*	67,560	75,910	— 11	— 2	+ 19
Pig Iron Production[18]	*Thous. Tons*	984	1,116	— 12	— 22	+ 1	*Thous. Tons*	6,258	6,779	— 8	— 17	+ 1
Machine Tools—Shipments[20]		b	b	b	b	b	*Mil. Dol.*	348.55	380.05	— 8	+ 27	+ 28
Machine Tools—New Orders[20]		b	b	b	b	b	*Mil. Dol.*	435.75	565.04	— 23	— 1	+ 30
Durable Goods—New Orders[13]		b	b	b	b	b	*Mil. Dol.[d]*	75,417	76,663	— 2	— 2	+ 10
CONSTRUCTION (Value of Contracts)												
• Total (Seas. Adj.)[9, 21]	*1967[d]*						*1967[d]*					
Total[9, 21]	*1967[f]*	171	210	— 18	— 13	+ 1	*Mil. Dol.*	10,751	14,188	— 24	— 8	+ 4
Residential Building[9, 21]	*1967[f]*	175	259	— 32	— 25	— 6	*Mil. Dol.*	4,717	6,864	— 31	— 21	+ x
Nonresidential Building[9, 21]	*1967[f]*	162	192	— 15	+ 1	+ 25	*Mil. Dol.*	3,849	4,869	— 21	+ 6	+ 10
Utilities and Non-Building Const.[9, 21]	*1967[f]*	186	139	+ 34	— 10	— 20	*Mil. Dol.*	2,185	2,455	— 11	+ 7	+ 5
DISTRIBUTION								76,992	75,620	+ 2	+ 10	+ 11
Total Retail Sales[2, 13]	*1957–59[d]*	297	293	+ 1	+ 2	+ 5	*Mil. Dol.[d]*	7,660	7,422	+ 3	+ 13	+ 8
Department Store Sales[2, 13]	*1957–59[d]*	287	269	+ 7	+ 8	+ 8	*Mil. Dol.[d]*	724,989	886,778	— 18	— 12	— 5
• New Passenger Cars Registered[3, 22]	*1967*	102	123	— 18	— 20	— 9	*No.–48 sts.*	247,843	313,461	— 21	— 21	— 11
New Trucks Registered[3, 22]	*No.–43 cos.*	4.952	6,881	— 28	— 41	— 20	*No –49 sts.*	b	b	b	b	b
Used Cars Registered[3]	*No.–33 cos.*	30,876	36,598	— 16	— 8	— 8						
PRICES												
Consumer Price Index[15]:												
All Urban Consumers		b	b	b	b	b	*1967*	228	225	+ 1	+ 13	+ 11
Wage Earners & Clerical Workers		b	b	b	b	b	*1967*	228	226	+ 1	+ 13	+ 11
Producer Price Index[15]:												
All Commodities		b	b	b	b	b	*1967*	247	245	+ 1	+ 14	+ 12
Finished Goods		b	b	b	b	b	*1967*	226	224	+ 1	+ 13	+ 11
Intermediate Materials		b	b	b	b	b	*1967*	256	255	+ 1	+ 15	+ 12
Crude Materials		b	b	b	b	b	*1967*	291	289	+ 1	+ 17	+ 18
Sensitive Indus. Commodities[15]		b	b	b	b	b	*1967*	304	308	— 1	+ 19	+ 27
BANKING AND FINANCE												
• Bank Loans, Large Banks—Total[11]	*Mil. Dol.*	23,096	23,404	— 1	n.a.	n.a.	*Mil. Dol.*	395,070	396,251	— x	n.a.	n.a.
" " " " Bus. & Agric.[11]	*Mil. Dol.*	8,457	8,575	— 1	n.a.	n.a.	*Mil. Dol.*	156,854	156,555	+ x	n.a.	n.a.
Stock Price Index—400 Indust.[23]		b	b	b	b	b	*1941–43 — 10*	116.4	115.7	+ 1	+ 13	+ 8
" " " 40 Utils.[23]		b	b	b	b	b	*1941–43 — 10*	49.0	49.0	+ x	+ 1	— 3
" " " 20 Trans.[23]		b	b	b	b	b	*1970 — 10*	14.7	14.5	+ 1	+ 14	+ 5
Yield, Corp. AAA Bonds[23]		b	b	b	b	b	*Percent*	10.69	10.11	+ 6	+ 20	+ 11

• Indicates series charted (page S-1). For sources and footnotes, see page S-3.

Business Conditions in the 8 Largest OHIO CITIES

ITEM	Unit or Index Base Period	Nov. 1979 (p)	Oct. 1979 (r)	LAST YEAR CHANGE FROM		Nov. 1979 (p)	Oct. 1979 (r)	CHANGE FROM LAST YEAR		Nov. 1979 (p)	Oct. 1979 (r)	CHANGE FROM LAST YEAR		Nov. 1979 (p)	Oct. 1979 (r)	CHANGE FROM LAST YEAR	
				Nov. 1979 from Nov. 1978	11 months 1979 from 1978			Nov. 1979 from Nov. 1978	11 months 1979 from 1978			Nov. 1979 from Nov. 1978	11 months 1979 from 1978			Nov. 1979 from Nov. 1978	11 months 1979 from 1978
		AKRON				**CANTON**				**CINCINNATI**				**CLEVELAND**			
				%	%			%	%			%	%			%	%
Number Employed[7]:																	
Total[w]	1967	85	84	— 6	— 6	95	96	— 3	+ 3	79	88	— 5	— 2	91	91	— 4	— x
Manufacturing	"	61	61	— 8	— 8	84	86	— 7	+ 4	69	73	— 11	— 3	74	72	— 8	— 1
Trade, Serv., & Utils.	"	116	113	— 4	— 4	114	113	+ 2	+ 1	87	103	— x	— 3	109	109	— 1	+ x
Construction	"	74	78	— 7	+ 1	88	86	— 2	+ x	93	93	+ 3	+ 18	82	91	— 4	+ 2
Payrolls[7]:																	
Total[w]	"	180	177	+ x	+ 1	232	236	— x	+ 11	210	218	— 3	+ 6	205	206	— 3	+ 5
• Manufacturing	"	133	130	— 3	— 3	200	205	— 4	+ 14	171	177	— 14	— 1	155	155	— 14	+ 4
Trade, Serv., & Utils.	"	269	267	+ 4	+ 5	313	320	+ 7	+ 8	257	269	+ 4	+ 10	268	269	+ 7	+ 7
Construction	"	167	180	— 11	+ 3	204	198	+ 4	+ 6	241	234	+ 20	+ 35	215	236	+ 7	+ 10
Emp. Earn.—Gross Wkly.[7]:																	
All Industries[w]	$	320.23	317.92	+ 7	+ 7	322.23	322.85	+ 4	+ 8	304.78	283.66	+ 1	+ 9	345.05	349.73	+ x	+ 6
Manufacturing	"	377.90	369.31	+ 7	+ 6	354.87	351.38	+ 4	+ 9	331.33	329.02	— 2	+ 3	359.52	368.92	— 6	+ 5
Trade, Serv., & Utils.	"	239.07	243.60	+ 9	+ 10	255.07	262.63	+ 5	+ 8	262.72	221.78	+ 3	+ 16	316.39	317.96	+ 7	+ 7
Construction	"	429.19	438.42	— 3	+ 2	446.11	443.80	— x	+ 5	453.72	444.90	+ 17	+ 14	482.03	470.71	+ 11	+ 6
Retail Sales[2]	%	c	c	+ 9	+ 9	c	c	+ 6	+ 9	c	c	— 4	+ 5	c	c	+ 3	+ 4
Auto Titles[3]:																	
New Cars	No.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4,438	5,375	— 18	— 8	7,066	8,418	— 21	— 10
New Trucks	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	653	829	— 35	— 16	767	985	— 34	— 14
Retail Food Prices[15]	1967	b	b	b	b	b	b	b	b	252	253	+ 9	+ 12	243	241	+ 9	+ 11
Bank Debits[5]	1967[f]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	No.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	Thous. $	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	1967[f]	147	152	— 10	+ x	b	b	b	b	b	b	b	b	b	b	b	b
Value of Bldg. Const.[9]:																	
Total	"	110	261	— 35	+ 11	117	152	— 21	+ 32	172	243	— 2	+ 21	59	111	— 44	+ 4
Residential	"	137	312	— 34	— 9	174	209	— 12	+ 8	122	189	— 45	+ 10	64	110	— 39	— 10
Nonresidential	"	82	210	— 36	+ 53	48	82	— 46	+ 82	217	291	+ 61	+ 29	55	112	— 49	+ 18
Steel Production[18]	1967[g]	b	b	b	b	b	b	b	b	88	85	— 25	— 8	106	124	— 17	+ 10
Labor Force Estimates[11]:																	
Civilian Labor Force	Thous.	243.9	244.0	— x	+ 1	173.9	174.6	+ 1	+ 4	439.6	439.4	+ 1	+ 2	756.6	758.8	— 1	+ 1
Civilian Employment	"	231.5	230.3	— 1	+ 1	164.2	164.5	+ x	+ 3	420.2	417.8	+ 1	+ 2	721.6	717.0	— 1	+ 1
Unemp. Total—No.	"	12.4	13.7	+ 3	+ 8	9.7	10.1	+ 5	+ 7	19.4	21.6	— 6	+ 3	35.0	41.8	+ 4	+ 8
Unemp., Total—Rate	%	5.1	5.6			5.6	5.8			4.4	4.9			4.6	5.5		
		COLUMBUS				**DAYTON**				**TOLEDO**				**YOUNGSTOWN**			
				%	%			%	%			%	%			%	%
Number Employed[7]:																	
Total[w]	1967	110	105	— 1	— x	108	108	— x	+ 2	100	102	— 5	— 1	87	86	— 1	+ 1
Manufacturing	"	75	73	— 7	— 7	70	71	— 5	— 1	77	80	— 17	— 7	59	59	+ x	+ 1
Trade, Serv., & Utils.	"	135	128	+ x	+ 2	162	161	+ 2	+ 5	123	123	+ 1	+ 3	124	122	+ x	+ 2
Construction	"	77	80	+ 3	+ 10	106	109	+ 2	+ 4	89	93	+ 22	+ 13	57	57	— 18	— 6
Payrolls[7]:																	
Total[w]	"	246	246	+ 3	+ 6	215	221	+ 2	+ 8	233	238	— 1	+ 4	199	195	+ 4	+ 10
• Manufacturing	"	152	157	— 9	+ x	153	162	— 7	+ 5	167	176	— 18	— 4	148	143	+ 2	+ 10
Trade, Serv., & Utils.	"	336	330	+ 7	+ 8	342	349	+ 8	+ 11	325	327	+ 11	+ 11	304	302	+ 9	+ 11
Construction	"	182	190	+ 14	+ 16	272	232	+ 34	+ 12	224	219	+ 33	+ 19	152	147	— 18	+ 5
Emp. Earn.—Gross Wkly.[7]:																	
All Industries[w]	$	263.99	277.14	+ 4	+ 8	352.69	362.47	+ 2	+ 7	328.13	328.82	+ 5	+ 6	314.86	310.10	+ 2	+ 9
Manufacturing	"	308.64	330.79	+ x	+ 9	388.67	408.69	— 1	+ 6	361.36	365.97	— 1	+ 4	355.58	345.21	— 1	+ 8
Trade, Serv., & Utils.	"	220.61	229.76	+ 6	+ 7	288.26	294.22	+ 6	+ 8	277.19	278.90	+ 12	+ 9	243.05	245.46	+ 9	+ 9
Construction	"	394.12	394.34	+ 11	+ 4	456.65	377.94	+ 33	+ 9	499.25	460.25	+ 8	+ 4	482.73	474.20	— 1	+ 12
Retail Sales[2]	%	c	c	+ 10	+ 3	n.a.	n.a.	n.a.	n.a.	c	c	+ 5	+ 1	c	c	+ 5	+ 3
Auto Titles[3]:																	
New Cars	No.	3,970	4,748	— 22	— 8	3,000	3,216	— 24	— 14	1,838	2,203	— 19	n.a.	1,179	1,365	— 12	— 2
New Trucks	"	630	966	— 34	— 14	356	468	— 51	— 29	356	465	— 40	n.a.	188	226	— 45	— 4
Retail Food Prices[15]	1967	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
Bank Debits[5]	1967[f]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	No.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	Thous. $	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	1967[f]	b	b	b	b	b	b	b	b	155	154	— 7	— 2	89	87	— 2	+ 6
Value of Bldg. Const.[9]:																	
Total	"	171	215	+ 31	+ 32	134	127	— 42	+ 17	199	232	+ 20	+ 36	106	277	— 30	+ 1
Residential	"	182	215	+ 8	+ 21	64	163	— 63	+ 11	200	197	— 7	— 9	110	234	— 17	— 15
Nonresidential	"	160	215	+ 70	+ 42	222	81	— 27	+ 24	199	250	+ 41	+ 90	101	328	— 42	+ 25
Steel Production[18]	1967[g]	b	b	b	b	b	b	b	b	b	b	b	b	69	79	— 25	— 1
Labor Force Estimates[11]:																	
Civilian Labor Force	Thous.	446.5	445.3	+ 1	+ 4	276.5	278.4	+ 1	+ 4	227.1	228.7	— 7	— 5	133.1	133.0	— 1	+ 2
Civilian Employment	"	430.2	424.9	+ 1	+ 4	260.9	260.1	— 1	+ 2	212.6	212.6	— 8	— 6	125.4	124.4	— x	+ 3
Unemp. Total—No.	"	16.4	20.4	— 12	+ 6	15.5	18.3	+ 34	+ 50	14.5	16.1	+ 7	+ 6	7.7	8.6	— 15	— 12
Unemp., Total—Rate	%	3.7	4.6			5.6	6.6			6.4	7.1			5.8	6.5		

NOTE: All data are for county areas except bank debits and commercial failures, which are for areas within city limits. The indexes of number employed and payrolls and the employee weekly earnings are based on data for production workers in manufacturing, construction workers in contract construction, and nonsupervisory employees in other categories which exclude agriculture, government, education, and public institutions.

• Indicates series charted (page S-1). For sources and footnotes, see page S-3.

Number Employed, Payrolls, and Man-Hours in Ohio Industry

INDUSTRIAL GROUP	NUMBER EMPLOYED[7]					PAYROLLS[7]					MAN-HOURS[7]				
	INDEX (1967 = 100)		CHANGE			INDEX (1967 = 100)		CHANGE			INDEX (1967 = 100)		CHANGE		
	Nov. 1979 (p)	Oct. 1979 (r)	Nov. 1979 from Oct. 1979	Nov. 1979 from Nov. 1978	11 months 1979 from 1978	Nov. 1979 (p)	Oct. 1979 (r)	Nov. 1979 from Oct. 1979	Nov. 1979 from Nov. 1978	11 months 1979 from 1978	Nov. 1979 (p)	Oct. 1979 (r)	Nov. 1979 from Oct. 1979	Nov. 1979 from Nov. 1978	11 months 1979 from 1978
			%	%	%			%	%	%			%	%	%
Total[w] (2,418)[a]	**90**	**90**	**+ x**	**— 2**	**— x**	**201**	**201**	**— x**	**+ 1**	**+ 6**	**88**	**87**	**+ x**	**— 4**	**— 1**
All Manufacturing[w] (1,314)	**78**	**79**	**— 1**	**— 6**	**— 1**	**178**	**181**	**— 2**	**— 5**	**+ 5**	**73**	**74**	**— 2**	**— 9**	**— 3**
Chemicals (69)	97	98	— x	— 2	+ x	217	215	+ 1	+ 4	+ 7	95	95	+ x	— 2	+ x
Food Products (90)	83	83	— x	+ x	— 1	204	204	— x	+ 11	+ 6	75	76	— 1	+ 2	— 3
Bakery	73	75	— 3	+ 6	— 2	182	177	+ 3	+ 22	+ 7	73	73	+ x	+ 13	— 1
Miscellaneous	84	84	+ x	— x	— 1	206	207	— x	+ 10	+ 6	75	76	— 1	+ 1	— 3
Lumber Products (45)	92	94	— 2	— 10	— 1	187	188	— 1	— 1	+ 5	84	85	— 1	— 9	— 2
Furniture	100	102	— 2	— 11	— 3	205	203	+ 1	— 1	+ 3	96	97	— x	— 9	— 4
Miscellaneous	79	82	— 3	— 7	+ 3	160	167	— 4	— 2	+ 10	66	68	— 2	— 8	+ 1
Machinery (305)	77	77	— x	+ 2	+ 1	166	169	— 1	+ 8	+ 9	73	74	— 1	— 1	+ x
Elec. Mach., Apparatus and Supplies	86	85	+ 1	+ 3	+ x	197	196	+ 1	+ 10	+ 7	82	81	+ 1	+ 1	— 1
Machine Tools	62	61	+ 1	+ 3	+ 5	145	142	+ 2	+ 14	+ 16	65	64	+ 2	+ 3	+ 5
Agricultural Equipment	48	47	+ 1	+ 1	+ 5	105	104	+ 2	+ 13	+ 15	53	53	+ 1	+ 1	+ 6
Special Machinery and Appliances	72	74	— 2	+ 1	+ 1	143	152	— 6	+ 4	+ 9	66	70	— 5	— 4	+ x
Metal Products (358)	85	84	+ 2	— 6	— 1	192	189	+ 2	— 8	+ 5	77	75	+ 2	— 12	— 3
Foundry Products and Drop Forgings	92	76	+ 21	— 14	— 7	226	178	+ 27	— 15	— 3	77	62	+ 24	— 17	— 8
Pipes, Valves, and Plumbers' Supplies	85	66	+ 30	— 2	+ 8	221	157	+ 41	+ 16	+ 12	96	76	+ 26	+ 2	+ 5
Screw Machine Products and Hdwe.	98	95	+ 3	— 1	+ 2	152	180	— 15	— 19	+ 1	84	95	— 12	— 19	— 4
Sheet Metal Work	93	95	— 1	— 10	— 4	203	213	— 5	— 13	— 2	78	81	— 3	— 16	— 8
Steel Works and Rolling Mills	77	78	— 1	— 4	+ 1	173	172	+ 1	— 7	+ 8	72	71	+ 1	— 9	+ x
Stoves and Furnaces	90	92	— 2	— 23	— 8	194	185	+ 5	— 15	— 1	100	98	+ 2	— 21	— 10
Miscellaneous	83	85	— 2	— 3	+ 1	189	190	— 1	— 2	+ 8	71	72	— 1	— 8	— x
Paper and Printing (139)	66	66	— 1	— 4	— 3	172	166	+ 4	+ 5	+ 3	64	63	+ 2	— 5	— 4
Paper and Pulp	48	49	— 3	— 5	— 4	172	160	+ 7	+ 9	+ 3	42	41	+ 2	— 3	— 7
Printing and Publishing	80	79	+ 1	— 1	— 2	185	180	+ 2	+ 4	+ 5	75	74	+ 1	+ 1	— 1
Miscellaneous	66	67	— 1	— 4	— 3	162	157	+ 3	+ 3	+ 2	68	67	+ 2	— 7	— 4
Rubber Products (55)	68	69	— 1	— 8	— 5	163	168	— 3	— 7	+ 3	62	64	— 3	— 12	— 5
Tires and Tubes	50	50	+ x	— 3	— 7	110	109	+ 1	— 2	+ 1	38	38	+ 1	— 9	— 7
Miscellaneous	78	80	— 2	— 10	— 5	205	216	— 5	— 9	+ 3	83	87	— 5	— 14	— 5
Stone, Clay, and Glass Products (94)	76	75	+ x	— 9	— 5	191	188	+ 2	— 2	+ x	84	84	+ 1	— 9	— 6
Brick and Tile	59	59	+ 1	— 5	+ 11	123	124	— 1	+ 5	+ 23	60	62	— 2	— 4	+ 14
Glass	79	78	+ 1	— 16	— 12	188	185	+ 1	— 9	— 7	81	80	+ 1	— 15	— 14
Vitreous & Semi-Vit. China & Pottery	58	58	+ 1	+ 3	— 1	168	161	+ 5	+ 13	+ 8	90	88	+ 2	+ 3	— 2
Miscellaneous	88	91	— 3	— 1	+ 3	239	237	+ 1	+ 2	+ 8	96	98	— 1	— 6	+ 2
Textiles (37)	69	73	— 7	— 10	— 2	106	115	— 7	— 7	+ 6	68	74	— 8	— 12	+ x
Men's Clothing	81	82	— 1	— 5	— 2	111	114	— 3	— 2	+ 7	73	76	— 4	— 8	+ 4
Miscellaneous	62	69	— 10	— 14	— 1	106	120	— 11	— 11	+ 5	66	73	— 10	— 14	— 2
Vehicles (62)	74	84	— 12	— 22	— 3	169	196	— 14	— 32	— 2	63	74	— 14	— 33	— 8
Autos and Parts	80	93	— 14	— 28	— 4	192	224	— 14	— 36	— 3	69	81	— 15	— 38	— 10
Cars, Electric and Steam Railway	120	119	+ 1	+ 12	+ 15	265	257	+ 3	+ 15	+ 24	110	109	+ 1	+ 12	+ 19
Miscellaneous	59	57	+ 3	+ 28	+ 2	105	126	— 16	+ 8	+ 9	[illegible]9	58	— 15	+ 1	+ 1
Miscellaneous Manufacturing (60)	66	65	+ 2	— 4	— 2	152	144	+ 6	+ 11	+ 7	64	62	+ 3	— 1	— 2
Total Trade, Service, and Utilities[w] (725)	**105**	**104**	**+ 1**	**+ x**	**— x**	**237**	**234**	**+ 1**	**+ 7**	**+ 7**	**109**	**107**	**+ 2**	**— x**	**+ x**
Service (214)	118	122	— 4	+ 3	+ 3	240	242	— 1	+ 8	+ 8	132	134	— 1	+ 4	+ 4
Trade, Retail and Wholesale (401)	98	93	+ 6	— 1	— 2	213	205	+ 4	+ 5	+ 6	96	92	+ 5	— 3	— 2
Transportation & Public Utilities (110)	108	109	— 1	— 1	+ 2	295	302	— 2	+ 8	+ 9	108	109	— 1	— 1	+ 2
Construction (351)	**79**	**80**	**— 2**	**+ 2**	**+ 5**	**200**	**192**	**+ 4**	**+ 17**	**+ 14**	**73**	**71**	**+ 3**	**+ 11**	**+ 7**
Mines and Quarries (28)	**128**	**128**	**— x**	**+ x**	**+ 26**	**274**	**270**	**+ 2**	**+ 8**	**+ 44**	**81**	**80**	**+ 1**	**+ x**	**+ 31**

Indexes of number employed and of payrolls are based on the employment of 524,577 persons (production workers in manufacturing and mining, construction workers in contract construction, and nonsupervisory employees in other categories) in 2,418 firms; indexes of man-hours, on the employment of 511,038 production workers and nonsupervisory employees in 2,318 firms. Figures in parentheses show number of firms reporting employment and payrolls. In some cases fewer firms report man-hours. Data do not include agriculture, government, education, or public institutions. For sources and footnotes, see below.

FOOTNOTES FOR BULLETIN TABLES AND CHARTS

†Change in number of failures; [a]Figures in parentheses show number of firms reporting this month; [n.a.]Current data not available; [b]Comparable data not available; [c]Only percentage of change available; [d]Adjusted for seasonal change; [f]Adjusted for number of working days; [g]Four weeks average; [h]Annual rate; [p]Preliminary; [r]Revised; [s]Series revised; [w]Weighted; [x]Less than 0.5 percent; [y]More than 1,000 percent increase.

Primary Sources:

Computed from: [1]Center for Business and Economic Research multiple regression model.

Computed from original data collected by the Center for Business and Economic Research from: [2]Ohio retailers; [3]County Clerks of Courts; [4]Local Power and Light Companies.

Computed by the Center for Business and Economic Research from data supplied by: [5]Board of Governors of the Federal Reserve System; [6]Life Insurance Marketing and Research Association; [7]Division of Research and Statistics of the Ohio Bureau of Employment Services, collected in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor; [8]Federal Power Commission; [9]F. W. Dodge Division, McGraw-Hill Information Systems Company; [10]Dun & Bradstreet, Inc.

Other data sources: [11]Federal Reserve Board; [12]Dun & Bradstreet, Inc.; [13]U.S. Department of Commerce; [14]Division of Research and Statistics of the Ohio Bureau of Employment Services; [15]U.S. Department of Labor; [16]Department of Agricultural Economics, O.S.U.; [17]U.S. Department of Agriculture; [18]American Iron and Steel Institute; [19]U.S. Department of Energy; [20]National Machine Tool Builders' Association; [21]F. W. Dodge Division, McGraw-Hill Information Systems Company; [22]R. L. Polk & Co.; [23]Standard & Poor's Corporation.

Note: In the Ohio-U.S. table, page S-2, dual source notes on a single line of the table stub refer first to Ohio data, second to U.S. data.

Ohio Retail Sales Trends

Sales of Ohio Retailers in November declined 2 percent from sales in October, but after adjustment for seasonal variation November sales increased 1 percent over October sales. Compared with year-ago November sales, current November sales were up 2 percent.

For the First Eleven Months of 1979, total retail sales were 4 percent above the sales total for the first eleven months of 1978.

By Kind of Business, year-to-date increases from last year were spread through 18 of the 23 individual businesses for which comparisons are shown. Among the 5 lines showing sales decreases from 11-month sales in 1978, the 4 percent decline in sales by motor vehicle dealers was the largest. The decline from year-ago sales of motor vehicle dealers in the month of November was even larger (—12 percent); but, again, a majority of businesses had sales gains over year-ago November. Compared with October sales, most consistent November gains by sales categories were by general merchandise and apparel lines.

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INDEXES OF OHIO RETAIL SALES

KIND OF BUSINESS	UNADJUSTED INDEX (1957–59 = 100)		CHANGE			
			Nov. 1979 from Oct. 1979		Nov. 1979 from Nov. 1978	11 months 1979 from 1978
	Nov. 1979 (p)	Oct. 1979 (r)	Not Seas. Adj.	Seas. Adj.		
				%	%	%
Total Retail Stores[a, b]	**299**	**305**	**— 2**	**+ 1**	**+ 2**	**+ 4**
Grocery Stores	318	301	+ 6	+ 5	+ 9	+ 6
Other Food Stores	409	413	— 1	+ 3	+27	+15
General Stores (With Food)	196	170	+15	+16	+15	+17
Department Stores	343	282	+22	+ 7	+ 8	+ 8
Other General Merchandise	260	215	+21	+14	+11	+ 8
Men's Clothing–Furns. Stores	159	128	+24	+12	+ 2	— 1
Family Clothing Stores	155	151	+ 3	— 2	+ 7	+ 4
Women's Ready-to-Wear Strs.	179	156	+15	+16	+ 3	+ 3
Shoe Stores	*131*	*126*	*+ 4*	*+ 7*	*+ 3*	*+ 2*
Furniture Stores	267	251	+ 6	+ 3	+ 5	+ 8
Household Appl.–TV-Rdio Strs.	236	248	— 5	— 3	— 9	— 2
Home Furnishings Stores	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Motor Vehicle Dealers	334	392	—15	— 7	—12	— 4
Other Automotive	145	159	— 8	— 2	—11	— 2
Filling Stations	398	432	— 8	— 1	+ 7	+11
Lumber–Bldg. Matls. Dealers	306	345	—11	+11	— 4	— x
Paint, Glass & Wallpaper Strs.	149	154	— 3	+12	+ x	+11
Heat.–Plumb. & Elec. Sup. Strs.	391	288	+36	+53	+40	+25
Hardware Stores	265	252	+ 5	+10	+ 3	+ x
Farm Equipment Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Eating & Drinking Places	204	225	— 9	— 1	+10	+15
Drug Stores	205	224	— 9	— 2	— 2	+ 5
Jewelry Stores	213	173	+23	— 1	+ 3	+ 7
Florists	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Fuel Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hay–Feed, Farm & Grdn. Strs.	407	378	+ 8	+47	—25	+10
State Liquor Stores	186	164	+13	+ 1	+10	+ 6

For sources and footnotes, see page S-3.

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Business Conditions in Ohio and the United States

ITEM	OHIO Unit or Index Base Period	OHIO Dec. 1979 (p)	OHIO Nov. 1979 (r)	OHIO Change From Last Month: Dec. 1979 from Nov. 1979	OHIO Change From Last Year: Dec. 1979 from Dec. 1978	OHIO Change From Last Year: 12 months 1979 from 1978	UNITED STATES Unit or Index Base Period	UNITED STATES Dec. 1979 (p)	UNITED STATES Nov. 1979 (r)	UNITED STATES Change From Last Month: Dec. 1979 from Nov. 1979	UNITED STATES Change From Last Year: Dec. 1979 from Dec. 1978	UNITED STATES Change From Last Year: 12 months 1979 from 1978
GENERAL BUSINESS				%	%	%				%	%	%
• Bank Debits[5, 11]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	*Bil. $ Ex. NY[d, h]*	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Number[12]	*Number*	n.a.	n.a.	n.a.	n.a.	n.a.	*Number*	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Liabilities[12]	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	n.a.	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	n.a.
Life Insurance Sales[6]	*1967*	364	323	+ 13	+ 8	+ 16	*1967*	412	350	+ 18	+ 16	+ 16
INCOME												
• Total Personal Income[1, 13]	*Mil. Dol.[d, h]*	97,849	96,926	+ 1	+ 9	+ 11	*Bil. Dol.[d, h]*	2,024	2,004	+ 1	+ 11	+ 12
Salaries & Wages Income[7, 13]	*Mil. Dol.[d, h]*	c	c	+ 1	+ 1	+ 5	*Bil. Dol.[d, h]*	1,283	1,271	+ 1	+ 10	+ 11
Nonagricultural Income[13]		b	b	b	b	b	*Bil. Dol.[d, h]*	1,972	1,952	+ 1	+ 11	+ 12
Employee Earn.—Gross Wkly.: Mfgr.[14, 15]	*Dollars*	343.09	329.19	+ 4	+ 4	+ 6	*Dollars*	285.77	277.55	+ 3	+ 7	+ 8
" " Const.[14, 15]	*Dollars*	437.21	441.96	— 1	+ 8	+ 7	*Dollars*	353.19	346.75	+ 2	+ 7	+ 7
Agr. Income (Cash Mktgs.)[16, 17]	*1957–59*	n.a.	n.a.	n.a.	n.a.	n.a.	*1967*	n.a.	n.a.	n.a.	n.a.	n.a.
EMPLOYMENT & UNEMPLOYMENT												
Civilian Labor Force[14, 15]	*Thousands*	5,110	5,098	+ x	+ 1	+ 3	*Thousands*	103,884	103,719	+ x	+ 2	+ 2
Civilian Employment[14, 15]	*Thousands*	4,842	4,829	+ x	+ 1	+ 2	*Thousands*	98,047	97,943	+ x	+ 2	+ 3
Nonagricultural Employment[14, 15]	*Thousands*	4,534	4,538	+ x	+ 1	+ 3	*Thousands*	95,052	94,686	+ x	+ 2	+ 3
Mfg. Prod. Employment[7, 15]	*1967*	78	78	— x	— 6	— 2	*1967*	105	105	+ x	+ x	+ 2
• Mfg. Prod. Payrolls[7, 15]	*1967*	184	178	+ 3	— 5	+ 4	*1967*	261	253	+ 3	+ 6	+ 10
Average Weekly Hours—Mfg. Prod.[7, 15]	*Number*	42.2	41.2	+ 2	— 3	— 2	*Number*	41.0	40.4	+ 1	— 1	— 1
Unemployment, Total—No.[14, 15]	*Thousands*	268	269	— x	+ 9	+ 12	*Thousands*	5,836	5,776	+ 1	+ 2	— 1
Unemployment, Total—Rate[14, 15]	*Percent*	5.2	5.3				*Percent*	5.6	5.6			
Unemployment, Insured[14, 15]	*Thousands*	159	115	+ 39	+ 81	+ 32	*Thousands*	n.a.	n.a.	n.a.	n.a.	n.a.
Registered for Work, O.B.E.S.[14]	*Thousands*	335	334	+ x	+ 6	— 5		b	b	b	b	b
Unemployment Compensation Fund[14]	*Mil. Dol.*	503	556	— 10	+ 13	+ 62		b	b	b	b	b
PRODUCTION												
Gross National Product (Quarterly)[13]		b	b	b	b	b	*Bil. Dol.[d, h]*	n.a.	n.a.	n.a.	n.a.	n.a.
Industrial Production[7, 11]	*1967*	c	c	+ 2	— 9	— 3	*1967[d]*	152	152	+ x	+ x	+ 4
• Steel Production[18]	*Thous. Tons*	1,419	1,437	— 1	— 25	— 1	*Thous. Tons*	9,996	9,997	— x	— 15	— 1
Electric Power Production[8]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	*Mil. K's H*	n.a.	n.a.	n.a.	n.a.	n.a.
Bituminous Coal Production[19]	*Thous. Tons*	3,385	3,915	— 14	— 18	— 1	*Thous. Tons*	60,319	67,560	— 11	+ 1	+ 18
Pig Iron Production[18]	*Thous. Tons*	974	984	— 1	— 24	— 1	*Thous. Tons*	6,372	6,258	+ 2	— 17	— 3
Machine Tools—Shipments[20]		b	b	b	b	b	*Mil. Dol.*	391.05	361.30	+ 8	+ 26	+ 28
Machine Tools—New Orders[20]		b	b	b	b	b	*Mil. Dol.*	392.35	432.90	— 9	+ 3	+ 27
Durable Goods—New Orders[13]		b	b	b	b	b	*Mil. Dol.[d]*	76,668	75,417	+ 2	— x	+ 9
CONSTRUCTION (Value of Contracts)												
• Total (Seas. Adj.)[9, 21]	*1967[d]*						*1967[d]*					
Total[9, 21]	*1967[f]*	135	171	— 21	— 28	— 1	*Mil. Dol.*	10,513	10,751	— 2	+ 6	+ 4
Residential Building[9, 21]	*1967[f]*	107	175	— 39	— 43	— 8	*Mil. Dol.*	4,304	4,717	— 9	— 9	— x
Nonresidential Building[9, 21]	*1967[f]*	116	162	— 28	— 31	+ 20	*Mil. Dol.*	3,559	3,849	— 8	+ 18	+ 10
Utilities and Non-Building Const.[9, 21]	*1967[f]*	251	186	+ 35	+ 2	— 18	*Mil. Dol.*	2,651	2,185	+ 21	+ 19	+ 5
DISTRIBUTION												
Total Retail Sales[2, 13]	*1957–59[d]*	278	297	— 6	+ 1	+ 4	*Mil. Dol.[d]*	76,809	76,427	+ x	+ 8	+ 11
Department Store Sales[2, 13]	*1957–59[d]*	285	287	— 1	— 3	+ 7	*Mil. Dol.[d]*	7,395	7,640	— 3	+ 7	+ 8
• New Passenger Cars Registered[3, 22]	*1967*	84	102	— 18	— 15	— 9	*No.–49 sts.*	831,319	724,989	+ 15	— 12	— 6
New Trucks Registered[3, 22]	*No.–43 cos.*	4,787	4,947	— 3	— 33	— 21	*No.–48 sts.*	265,235	247,843	+ 7	— 26	+ 13
Used Cars Registered[3]	*No.–31 cos.*	21,021	27,092	— 22	— 11	— 8		b	b	b	b	b
PRICES												
• Consumer Price Index[15]:												
All Urban Consumers		b	b	b	b	b	*1967*	230	228	+ 1	+ 13	+ 11
Wage Earners & Clerical Workers		b	b	b	b	b	*1967*	230	228	+ 1	+ 13	+ 11
Producer Price Index[15]:												
All Commodities		b	b	b	b	b	*1967*	249	247	+ 1	+ 15	+ 13
Finished Goods		b	b	b	b	b	*1967*	226	226	+ 1	+ 12	+ 11
Intermediate Materials		b	b	b	b	b	*1967*	258	256	+ 1	+ 16	+ 13
Crude Materials		b	b	b	b	b	*1967*	297	291	+ 2	+ 18	+ 18
Sensitive Indus. Commodities[15]		b	b	b	b	b	*1967*	310	304	+ 2	+ 23	+ 27
BANKING AND FINANCE												
• Bank Loans, Large Banks—Total[11]	*Mil. Dol.*	23,529	23,096	+ 2	n.a.	n.a.	*Mil. Dol.*	404,898	395,070	+ 2	n.a.	n.a.
" " " " Bus. & Agric.[11]	*Mil. Dol.*	8,608	8,457	+ 2	n.a.	n.a.	*Mil. Dol.*	159,533	156,854	+ 2	n.a.	n.a.
Stock Price Index—400 Indust.[23]		b	b	b	b	b	*1941–43 = 10*	121.4	116.4	+ 4	+ 15	+ 8
" " " 40 Utils.[23]		b	b	b	b	b	*1941–43 = 10*	50.7	49.0	+ 4	+ 4	— 2
" " " 20 Utils.[23]		b	b	b	b	b	*1970 = 10*	12.6	12.8	— 1	— 5	— 3
Yield, Corp. AAA Bonds[23]		b	b	b	b	b	*Percent*	10.55	10.69	— 1	+ 14	+ 9

• Indicates series charted (page S-1). For sources and footnotes, see page S-3.

Business Conditions in the 8 Largest OHIO CITIES

ITEM	Unit or Index Base Period	Dec. 1979 (p)	Nov. 1979 (r)	Change From Last Year: Dec. 1979 from Dec. 1978	Change From Last Year: 12 months 1979 from 1978	Dec. 1979 (p)	Nov. 1979 (r)	Change From Last Year: Dec. 1979 from Dec. 1978	Change From Last Year: 12 months 1979 from 1978	Dec. 1979 (p)	Nov. 1979 (r)	Change From Last Year: Dec. 1979 from Dec. 1978	Change From Last Year: 12 months 1979 from 1978	Dec. 1979 (p)	Nov. 1979 (r)	Change From Last Year: Dec. 1979 from Dec. 1978	Change From Last Year: 12 months 1979 from 1978
		AKRON				**CANTON**				**CINCINNATI**				**CLEVELAND**			
				%	%			%	%			%	%			%	%
Number Employed[2]:																	
Total*	1967	86	85	— 5	— 6	94	95	— 5	+ 2	79	79	— 6	— 2	91	91	— 4	— 1
Manufacturing	"	61	61	— 8	— 8	83	84	— 7	+ 3	68	69	— 14	— 4	73	74	— 9	— 2
Trade, Serv., & Utils.	"	120	116	— 3	— 4	112	114	— 1	+ 1	88	87	+ x	— 2	110	109	— x	+ x
Construction	"	67	74	— 1	+ x	80	88	— 9	— x	87	93	+ 1	+ 17	78	82	+ 1	+ 2
Payrolls[7]:																	
Total*	"	184	180	+ x	+ 1	228	232	— 2	+ 10	212	210	— 7	+ 5	211	205	— 2	+ 5
• Manufacturing	"	133	133	— 7	— 3	198	200	— 6	+ 12	174	171	— 19	— 3	166	155	— 13	+ 2
Trade, Serv., & Utils.	"	284	269	+ 7	+ 5	309	313	+ 4	+ 8	263	257	+ 4	+ 10	270	268	+ 7	+ 7
Construction	"	153	167	+ 3	+ 3	182	204	— 7	+ 5	211	241	+ 2	+ 32	210	215	+ 16	+ 10
Emp. Earn.—Gross Wkly.[7]:																	
All Industries*	$	322.14	320.23	+ 5	+ 7	317.34	322.23	+ 2	+ 8	311.50	304.79	— 2	+ 8	361.08	345.05	+ 2	+ 6
Manufacturing	"	376.30	377.90	+ 3	+ 5	346.96	354.87	+ 1	+ 8	344.62	331.33	— 4	+ [illegible]	389.60	359.52	— 3	+ 4
Trade, Serv., & Utils.	"	245.00	239.07	+ 10	+ 10	255.43	255.07	+ 5	+ 7	266.76	262.72	— x	+ [illegible]	318.52	316.39	+ 7	+ 7
Construction	"	435.20	429.19	+ 4	+ 3	437.85	446.11	— 4	+ 4	425.20	453.72	+ 1	+ 12	495.95	482.03	+ 16	+ 7
Retail Sales[2]	%	c	c	n.a.	+ 7	c	c	n.a.	+ 9	c	c	n.a.	+ 3	c	c	n.a.	+ 3
Auto Titles[3]:																	
New Cars	No.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3,626	4,438	— 15	— 8	5,699	7,066	— 17	— 11
New Trucks	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	689	653	— 20	— 16	714	767	— 30	— 15
Retail Food Prices[16]	1967	b	b	b	b	b	b	b	b	255	252	+ 9	+ 11	246	243	+ 8	+ 11
Bank Debits[3]	1967[f]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	No.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	Thous. $	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	1967[f]	136	147	— 7	— 1	b	b	b	b	b	b	b	b	b	b	b	b
Value of Bldg. Const.[9]:																	
Total	"	84	110	+ 1	+ 10	43	117	— 68	+ 25	156	172	+104	+ 24	46	59	— 69	— 5
Residential	"	54	137	— 51	— 11	57	174	— 72	+ x	168	122	+109	+ 14	36	64	— 67	— 15
Nonresidential	"	115	82	+101	+ 55	26	48	— 45	+ 77	145	217	+ 99	+ 32	55	55	— 70	+ 5
Steel Production[18]	1967[g]	b	b	b	b	b	b	b	b	82	88	— 26	— 9	113	106	— 14	+ 8
Labor Force Estimates[11]:																	
Civilian Labor Force	Thous.	246.4	243.9	+ 1	+ 1	173.7	173.9	+ 1	+ 3	443.4	439.6	+ 2	+ 2	763.5	756.6	— x	+ 1
Civilian Employment	"	233.3	231.5	+ 1	+ 1	163.8	164.2	+ x	+ 3	423.6	420.2	+ 2	+ 2	727.5	721.6	— 1	+ 1
Unemp. Total—No.	"	13.1	12.4	+ 7	+ 8	9.9	9.7	+ 13	+ 8	19.8	19.4	— 1	+ 3	36.0	35.0	+ 10	+ 9
Unemp., Total—Rate	%	5.3	5.1			5.7	5.6			4.5	4.4			4.7	4.6		
		COLUMBUS				**DAYTON**				**TOLEDO**				**YOUNGSTOWN**			
				%	%			%	%			%	%			%	%
Number Employed[2]:																	
Total*	1967	113	110	— 2	— x	108	108	— 2	+ 2	100	100	— 5	— 1	87	87	+ x	+ 1
Manufacturing	"	75	75	— 8	— 7	70	70	— 5	— 2	76	77	— 17	— 7	57	59	+ 2	+ 1
Trade, Serv., & Utils.	"	142	135	— x	+ 1	163	162	+ 1	+ 4	123	123	+ x	+ 3	126	124	+ 1	+ 2
Construction	"	74	77	+ 8	+ 9	95	106	+ 6	+ 4	84	89	+ 27	+ 14	57	57	— 17	— 7
Payrolls[7]:																	
Total*	"	260	246	+ 3	+ 6	217	215	+ 1	+ 7	238	233	— 3	+ 4	195	199	+ 6	+ 10
• Manufacturing	"	168	152	— 4	— x	161	153	— 5	+ 4	177	167	— 18	— 6	137	148	+ 11	+ 10
Trade, Serv., & Utils.	"	352	336	+ 5	+ 8	343	342	+ 6	+ 10	326	325	+ 7	+ 10	309	304	+ 7	+ 11
Construction	"	176	182	+ 24	+ 17	213	272	+ 7	+ 12	209	224	+ 32	+ 20	154	152	— 22	+ 2
Emp. Earn.—Gross Wkly.[7]:																	
All Industries*	$	276.89	263.99	+ 7	+ 8	358.46	352.69	+ 2	+ 7	344.74	328.13	+ 5	+ 6	305.67	314.86	+ 4	+ 9
Manufacturing	"	345.83	308.64	+ 7	+ 9	404.48	388.67	+ x	+ 6	392.49	361.36	+ 2	+ 4	336.81	355.58	+ 6	+ 8
Trade, Serv., & Utils.	"	219.45	220.61	+ 6	+ 7	287.13	288.26	+ 6	+ 8	283.59	277.19	+ 10	+ 9	242.78	243.05	+ 6	+ 9
Construction	"	399.10	394.12	+ 16	+ 5	401.31	456.65	+ 2	+ 8	488.13	499.25	+ 2	+ 3	490.66	482.73	— 6	+ 10
Retail Sales[2]	%	c	c	n.a.	+ 2	c	c	n.a.	n.a.	c	c	n.a.	+ x	c	c	n.a.	+ 3
Auto Titles[3]:																	
New Cars	No.	3,450	3,970	— 15	— 8	2,377	3,000	— 21	— 14	1,722	1,838	— 2	n.a.	799	1,179	— 23	— 3
New Trucks	"	570	630	— 29	— 15	324	356	— 48	— 31	314	356	— 37	n.a.	119	188	— 50	— 8
Retail Food Prices[16]	1967	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
Bank Debits[3]	1967[f]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	No.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	Thous. $	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	1967[f]	b	b	b	b	b	b	b	b	141	155	— 6	— 2	88	89	— x	+ 5
Value of Bldg. Const.[9]:																	
Total	"	156	171	— 42	+ 22	83	134	+ 10	+ 16	122	199	— 43	+ 27	110	106	+ 67	+ 3
Residential	"	238	182	+ 40	+ 23	60	64	— 34	+ 8	124	200	— 61	— 14	143	110	+ 50	— 13
Nonresidential	"	74	160	— 80	+ 22	111	222	+ 99	+ 26	121	199	— 26	+ 77	72	101	+125	+ 27
Steel Production[18]	1967[g]	b	b	b	b	b	b	b	b	b	b	b	b	65	69	— 27	— 3
Labor Force Estimates[11]:																	
Civilian Labor Force	Thous.	450.3	446.5	+ 2	+ 4	276.5	276.5	+ 1	+ 4	228.0	227.1	— 6	— 5	135.1	133.1	+ 1	+ 2
Civilian Employment	"	433.7	430.2	+ 2	+ 4	262.5	260.9	— x	+ 2	213.8	212.6	— 7	— 6	126.3	125.4	+ 1	+ 3
Unemp. Total—No.	"	16.6	16.4	— 7	+ 5	14.1	15.5	+ 30	+ 49	14.2	14.5	+ 6	+ 6	8.8	7.7	+ 2	— 11
Unemp., Total—Rate	%	3.7	3.7			5.1	5.6			6.2	6.4			6.5	5.8		

NOTE: All data are for county areas except bank debits and commercial failures, which are for areas within city limits. The indexes of number employed and payrolls and the employee weekly earnings are based on data for production workers in manufacturing, construction workers in contract construction, and nonsupervisory employees in other categories which exclude agriculture, government, education, and public institutions.

• Indicates series charted (page S-3). For sources and footnotes, see page S-3.

Number Employed, Payrolls, and Man-Hours in Ohio Industry

INDUSTRIAL GROUP	NUMBER EMPLOYED[7]					PAYROLLS[7]					MAN-HOURS[7]				
	INDEX (1967 = 100)		CHANGE			INDEX (1967 = 100)		CHANGE			INDEX (1967 = 100)		CHANGE		
	Dec. 1979 (p)	Nov. 1979 (r)	Dec. 1979 from Nov. 1979	Dec. 1979 from Dec. 1978	12 months 1979 from 1978	Dec. 1979 (r)	Nov. 1979 (p)	Dec. 1979 from Nov. 1979	Dec. 1979 from Dec. 1978	12 months 1979 from 1978	Dec. 1979 (p)	Nov. 1979 (r)	Dec. 1979 from Nov. 1979	Dec. 1979 from Dec. 1978	12 months 1979 from 1978
			%	%	%			%	%	%			%	%	%
Total[w] (2,417)[a]	**91**	**90**	**+ 1**	**— 3**	**— x**	**206**	**201**	**+ 2**	**+ 1**	**+ 6**	**90**	**88**	**+ 2**	**— 4**	**— 1**
All Manufacturing[w] (1,314)	**78**	**78**	**— x**	**— 6**	**— 2**	**184**	**178**	**+ 3**	**— 5**	**+ 4**	**74**	**73**	**+ 2**	**— 9**	**— 3**
Chemicals (69)	96	97	— 1	— 3	— x	211	217	— 3	— 1	+ 6	93	95	— 1	— 4	— x
Food Products (90)	82	83	— 1	— x	— 1	205	204	+ 1	+ 8	+ 6	74	75	— 2	— 1	— 3
Bakery	73	73	— x	+ 6	— 1	178	182	— 2	+ 17	+ 8	71	73	— 3	+ 8	— 1
Miscellaneous	83	84	— 1	— 1	— 1	208	206	+ 1	+ 7	+ 6	74	75	— 1	— 2	— 3
Lumber Products (45)	91	92	— 1	— 10	— 2	188	187	+ x	— 3	+ 4	83	84	— 1	— 11	— 3
Furniture	99	100	— 1	— 11	— 4	206	205	+ x	— 3	+ 3	95	96	— 2	— 12	— 5
Miscellaneous	78	79	— 1	— 7	+ 2	160	160	— x	— 3	+ 9	66	66	— x	— 8	+ 1
Machinery (305)	76	77	— x	+ 1	+ 1	175	166	+ 5	+ 10	+ 9	75	73	+ 3	+ 1	+ x
Elec. Mach., Apparatus and Supplies	86	86	+ x	+ 3	+ 1	209	197	+ 6	+ 14	+ 8	85	82	+ 4	+ 4	— 1
Machine Tools	62	62	+ x	+ 2	+ 5	148	145	+ 2	+ 13	+ 15	66	65	+ 1	+ 2	+ 5
Agricultural Equipment	49	48	+ 3	— x	+ 5	115	105	+ 9	+ 11	+ 15	57	53	+ 7	+ x	+ 5
Special Machinery and Appliances	71	72	— 1	— 1	+ 1	150	143	+ 5	+ 5	+ 9	68	66	+ 3	— 4	+ x
Metal Products (358)	85	85	— 1	— 8	— 2	196	192	+ 2	— 6	+ 4	77	77	+ 1	— 11	— 4
Foundry Products and Drop Forgings	91	92	— 2	— 16	— 7	245	226	+ 8	— 15	— 4	80	77	+ 4	— 19	— 9
Pipes, Valves, and Plumbers' Supplies	84	85	— 1	— 2	+ 7	220	221	— 1	+ 8	+ 12	95	96	— 1	— 3	+ 4
Screw Machine Products and Hdwe.	95	98	— 3	— 4	+ 1	183	152	+ 20	— 4	+ 1	96	84	+ 14	— 8	— 4
Sheet Metal Work	90	93	— 3	— 13	— 5	211	203	+ 4	— 11	— 3	79	78	+ 1	— 16	— 9
Steel Works and Rolling Mills	77	77	— 1	— 4	+ x	167	173	— 3	— 3	+ 7	69	72	— 4	— 9	— 1
Stoves and Furnaces	89	90	— 1	— 20	— 9	212	194	+ 9	+ 15	+ x	108	100	+ 8	+ 2	— 9
Miscellaneous	84	83	+ 1	— 5	+ x	192	189	+ 2	— 4	+ 7	74	71	+ 3	— 8	— 1
Paper and Printing (139)	66	66	— 1	— 4	— 3	171	172	— 1	+ 3	+ 3	63	64	— x	— 5	— 4
Paper and Pulp	48	48	+ 1	— 3	— 4	161	172	— 6	+ 5	+ 3	41	42	— 4	— 5	— 7
Printing and Publishing	75	80	— 6	— 7	— 2	174	185	— 6	— x	+ 5	70	75	— 6	— 5	— 1
Miscellaneous	67	66	+ 1	— 3	— 3	169	162	+ 4	+ 4	+ 3	71	68	+ 3	— 5	— 4
Rubber Products (55)	67	68	— 2	— 10	— 6	159	163	— 2	— 11	+ 2	61	62	— 3	— 16	— 6
Tires and Tubes	56	58	— 1	— 4	— 7	107	110	— 3	— 6	+ 1	37	38	— 2	— 10	— 7
Miscellaneous	76	78	— 2	— 12	— 5	201	205	— 2	— 14	+ 2	80	83	— 3	— 19	— 6
Stone, Clay, and Glass Products (94)	75	76	— 1	— 8	— 5	189	191	— 1	— 4	— x	83	84	— 1	— 9	— 6
Brick and Tile	58	59	— 2	— 6	+ 10	121	123	— 1	+ 2	+ 21	60	60	— x	— 5	+ 12
Glass	80	[illegible]	— 1	— 14	— 12	189	188	+ 1	— 10	— 7	82	81	+ 1	— 14	— 14
Vitreous & Semi-Vit. China & Pottery	57	58	— 2	+ 1	— 1	169	168	+ 1	+ 12	+ 9	88	90	— 2	+ 1	— 1
Miscellaneous	86	88	— 3	— 3	+ 3	221	239	— 7	— 1	+ 7	91	96	— 6	— 8	+ 1
Textiles (37)	72	69	+ 5	— 5	— 2	113	106	+ 6	+ 1	+ 5	72	68	+ 6	— 4	— x
Men's Clothing	81	81	+ x	— 5	— 2	112	111	+ x	+ 3	+ 7	74	73	+ 1	— 4	+ 3
Miscellaneous	67	62	+ 9	— 6	— 2	119	106	+ 12	— 1	+ 4	72	66	+ 10	— 4	— 2
Vehicles (62)	76	74	+ 3	— 21	— 4	193	169	+ 15	— 28	— 4	72	63	+ 13	— 29	— 10
Autos and Parts	82	80	— 3	— 27	— 6	217	192	+ 13	— 34	— 6	77	69	+ 12	— 35	— 12
Cars, Electric and Steam Railway	122	120	+ 2	+ 16	+ 15	256	265	— 3	+ 13	+ 23	107	110	— 3	+ 9	+ 18
Miscellaneous	60	59	+ 2	+ 27	+ 4	139	105	+ 33	+ 39	+ 11	49	27	+ 24	+ 3	+ 19
Miscellaneous Manufacturing (60)	66	66	— 1	— 5	— 2	153	152	+ 1	+ 8	+ 7	64	64	— x	— 3	— 2
Total Trade, Service, and Utilities[w] (724)	**108**	**105**	**+ 2**	**— x**	**— x**	**244**	**237**	**+ 3**	**+ 6**	**+ 7**	**113**	**109**	**+ 4**	**— x**	**+ x**
Service (214)	118	118	+ x	+ 3	+ 3	243	240	+ 1	+ 8	+ 8	132	132	+ x	+ 3	+ 4
Trade, Retail and Wholesale (400)	102	98	+ 4	— 2	— 2	225	213	+ 5	+ 6	+ 6	103	96	+ 7	— 2	— 2
Transportation & Public Utilities (110)	108	108	+ x	— 1	+ 1	296	295	+ x	+ 6	+ 9	108	108	— x	— 2	+ 2
Construction (351)	**74**	**79**	**— 6**	**+ 6**	**+ 5**	**187**	**200**	**— 6**	**+ 18**	**+ 14**	**68**	**73**	**— 7**	**+ 11**	**+ 8**
Mines and Quarries (28)	**125**	**128**	**— 2**	**— 1**	**+ 24**	**261**	**274**	**— 5**	**+ 1**	**+ 39**	**77**	**81**	**— 5**	**— 5**	**+ 27**

Indexes of number employed and of payrolls are based on the employment of 523,574 persons (production workers in manufacturing and mining, construction workers in contract construction, and nonsupervisory employees in other categories) in 2,417 firms; indexes of man-hours, on the employment of 509,642 production workers and nonsupervisory employees in 2,315 firms. Figures in parentheses show number of firms reporting employment and payrolls. In some cases fewer firms report man-hours. Data do not include agriculture, government, education, or public institutions. For sources and footnotes, see below.

FOOTNOTES FOR BULLETIN TABLES AND CHARTS

[t]Change in number of failures; [a]Figures in parentheses show number of firms reporting this month; [n.a.]Current data not available; [b]Comparable data not available; [c]Only percentage of change available; [d]Adjusted for seasonal change; [f]Adjusted for number of working days; [g]Four weeks average; [h]Annual rate; [p]Preliminary; [r]Revised; [s]Series revised; [w]Weighted; [x]Less than 0.5 percent; [y]More than 1,000 percent increase.

Primary Sources.

Computed from: [1]Center for Business and Economic Research multiple regression model.

Computed from original data collected by the Center for Business and Economic Research from: [2]Ohio retailers; [3]County Clerks of Courts; [4]Local Power and Light Companies.

Computed by the Center for Business and Economic Research from data supplied by: [5]Board of Governors of the Federal Reserve System; [6]Life Insurance Marketing and Research Association; [7]Division of Research and Statistics of the Ohio Bureau of Employment Services, collected in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor; [8]Federal Power Commission; [9]F. W. Dodge Division, McGraw-Hill Information Systems Company; [10]Dun & Bradstreet, Inc.

Other data sources: [11]Federal Reserve Board; [12]Dun & Bradstreet, Inc.; [13]U.S. Department of Commerce; [14]Division of Research and Statistics of the Ohio Bureau of Employment Services; [15]U.S. Department of Labor; [16]Department of Agricultural Economics, O.S.U.; [17]U.S. Department of Agriculture; [18]American Iron and Steel Institute; [19]U.S. Department of Energy; [20]National Machine Tool Builders' Association; [21]F. W. Dodge Division, McGraw-Hill Information Systems Company; [22]R. L. Polk & Co.; [23]Standard & Poor's Corporation.

Note: In the Ohio-U.S. table, page S-2, dual source notes on a single line of the table stub refer first to Ohio data, second to U.S. data.

Ohio Retail Sales Trends

December Sales of Ohio Retailers were higher than sales during any single month in the past—surpassing by 1 percent the previous sales peak in December 1978. Current December sales were 14 percent above sales in November before seasonal adjustment, but adjustment for the seasonal pattern changed the relationship of the December index to the November index to —6 percent.

Sales for the Year 1979 became the highest annual sales on record by increasing 4 percent over 1978 sales, the previous high. However, the 4 percent gain was the lowest year-to-year gain since 1975.

By Kind of Business, the most dominant effect in depressing 1979 sales was the downward year-to-year trend in sales of motor vehicle dealers, which declined 14 percent in the December-to-December comparison and 5 percent for the year as a whole. Less influential year-to-year declines were shown by household appliance-TV-radio stores (—3 percent), men's clothing stores (—1 percent), and lumber-building materials dealers (down less than 0.5 percent). Substantial gains in 1979 over 1978 occurred in heating-plumbing and electrical supply stores (+27 percent), general stores (+17 percent), and eating and drinking places (+15 percent).

INDEXES OF OHIO RETAIL SALES

KIND OF BUSINESS	INDEX (1957–59 = 100)		CHANGE			
	Dec. 1979 (p)	Nov. 1979 (r)	Dec. 1979 from Nov. 1979		Dec. 1979 from Dec. 1978	12 months 1979 from 1978
			Not Seas. Adj.	Seas. Adj.		
			%	%	%	%
Total Retail Stores[2] [w]	**341**	**299**	**+14**	**— 6**	**+ 1**	**+ 4**
Grocery Stores	351	318	+10	— 1	+ 4	+ 6
Other Food Stores	365	409	—11	—16	+ 2	+14
General Stores (With Food)	228	196	+17	— 8	+14	+17
Department Stores	553	343	+61	— x	— 3	+ 6
Other General Merchandise	503	260	+94	+10	+10	+ 9
Men's Clothing-Furns. Stores	286	159	+79	+ 2	— 2	— 1
Family Clothing Stores	229	155	+48	—11	— 9	+ 2
Women's Ready-to-Wear Stores	294	179	+64	+ 5	— 3	+ 2
Shoe Stores	182	131	+40	— 2	+12	+ 3
Furniture Stores	279	267	+ 5	—15	+ 2	+ 7
Household Appl.-TV-Rdio Strs.	335	236	+42	— 8	— 9	— 3
Home Furnishings Stores	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Motor Vehicle Dealers	281	334	—16	—14	—14	— 5
Other Automotive	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Filling Stations	356	398	—11	—13	— 1	+10
Lumber-Bldg. Matls. Dealers	239	306	—22	+ 4	— 3	— x
Paint, Glass & Wallpaper Strs.	130	149	—13	— 8	+ 1	+10
Heat.-Plumb. & Elec. Sup. Strs.	299	391	—24	—15	+53	+27
Hardware Stores	318	265	+20	—13	+ 5	+ 1
Farm Equipment Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Eating & Drinking Places	243	204	+19	+10	+10	+15
Drug Stores	258	205	+26	— 8	— 6	+ 4
Jewelry Stores	676	213	+218	+16	+ 8	+ 7
Florists	270	126	+114	+20	— 6	+10
Fuel Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hay-Feed, Farm & Grdn. Strs.	439	407	+ 8	+19	+70	+14
State Liquor Stores	342	186	+84	— 8	+ 2	+ 5

For sources and footnotes, see page S-3.

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BULLETIN OF BUSINESS RESEARCH

CENTER FOR BUSINESS AND ECONOMIC RESEARCH
THE OHIO STATE UNIVERSITY • VOLUME LV, NUMBER 3 • MARCH 1980

By PAUL G. CRAIG

The Economy of the Eighties—A Preview

History conditions the future. And for those who study it carefully, it casts at least a dim light down the dark trail ahead. The popular image of the 1970s is one of a decade everyone was glad to see ended. Plagued by inflation, government regulation, energy problems, and international tensions, it is a decade to which many will say "good riddance." But be cautious in your rejection of a rather tired old decade; it may have been better than you think, and its problems may give insight into the 1980s.

The 1970s—Framework for the 1980s

The 1970s were not entirely bad. Industrial production increased by 37 percent; employment increased by 24 percent; and real (price adjusted) GNP increased by 32 percent. Even per capita real GNP increased 19 percent. In terms of gross indicators of output, we did not do too badly in the decade. And we may be hard pressed to do better in the 1980s.

There are two facets to the negative feelings about the 1970s. First, although economic output, by any measure, expanded substantially, it failed by a large margin to equal the magnificent gains of the 1960s. On both an aggregate and a per capita basis, the economic growth of the 1960s was 50 percent higher than that of the 1970s. That is quite a let down! Second, the 1970s decade was filled with cultural, social, technical, and political changes that fundamentally transformed our society. It is not an exaggeration to assert that we became collectively disoriented and frightened.

Americans are confronted with the paradox that never has the average person had so much and, at the same time, not in a generation has there been such a sense of malaise. These indeed seem both the best and the worst of times.

The Major Features of the 1970s

Each observer is likely to have a slightly different perspective on our recent past. At a New Year's Eve party, the game of debating "What was the most significant event or change of the 1970s?" resulted in three leading contenders: the women's movement, the energy crisis, and inflation. I would concur and place them in that order. But I would add several significant related developments: the changed age-mix of the population—the baby boom grew up; the impact of an extensive array of government-imposed environmental regulations; the maturing of the Great Society egalitarian movement and its effect on government spending—from the mid-sixties to 1979, government's share of the economy (GNP) grew from 27 percent to 33 percent; the decline in personal savings rates—from 6 percent of disposable income in the 1960s to a little over 3 percent by the end of 1979; and the decline in productivity in virtually all areas of business and industry.

Surely these and many other events are closely related and intertwined. Just which ones may have caused the others is not entirely clear. But to an economist, the bottom line is that growth has stagnated and inflation has accelerated. This may explain the paradox mentioned earlier—i.e., a decade of substantial economic growth associated with widespread feelings of unease. Although the total decade came off reasonably well, the last couple of years of the 1970s were marked by gradually worsening economic conditions. For 1979, declining productivity and rising inflation caused the average family to experience a small decline in real purchasing power. We open the new decade sliding into recession.

Rather than discuss the decade of the 1980s, we could dwell on a forecast of the recession of 1980. In this article,

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The Economies of the Eighties—A Preview

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I pass it by, noting only that the consensus among economists is that the recession will be relatively mild, be on the road to recovery by early 1981, and have only a moderate depressing effect on inflation and interest rates. For planning purposes it is more important to assess what the recent past suggests as a likely scenario for the 1980s as a whole.

Demographics

Demographics explain a good bit about the 1970s and suggest a good bit about the 1980s. The baby boom grew up in the 1970s and went to work—*all of them, male and female*. The consequence was a society dominated by young adults and a changing life style associated with working women. By 1980 over one-half of all adult women were working and over 60 percent of adult women under 30 were working. The number of households increased by 17 million in a decade. Associated with these events was a dramatic drop in the projected lifetime fertility rate from 2.7 children per woman in the 1960s to 1.7 in 1979. Even though the number of women in the child-bearing age group expanded rapidly, the annual number of live births declined from 3.7 million in the late 1960s to 3.1 million in 1979.

Looking backward, these demographics illuminate much about the 1970s. They gave us the highest rate of growth in the labor force since the 1920s, about 2.5 percent per year compounded. That enabled us to have relatively high economic growth even though our record on productivity was deteriorating. They gave us unusually strong demand for housing and increased the share of GNP devoted to residential construction. And, of course, there were increased expenditures for shopping centers and the other forms of social infrastructure (sewers, water, streets, etc.) related to housing. They gave us a lower savings rate. The 20 to 35 age group increased from about one-fourth of the population to almost one-third of the population. This age group traditionally has a low savings rate and high debt. They are establishing households and acquiring their first set of household goods. All of these events contributed to the scarcity of capital, lower productivity growth, and increasing inflation.

The Environment and Natural Resources

If we consider the biosphere's capacity to absorb and dilute waste (pollution) as a kind of natural resource, then both environmental protection regulation and energy scarcities are evidence of a declining natural resource base. Government enforcement of environmental regulation may be inept, too stringent, and too fast, but few would challenge the necessity to take heed of an increasingly threatened environment. Likewise, OPEC may have found cartelization an effective route to rising energy prices. But few serious observers question that the world's energy supply/demand is precarious. It may even turn out that OPEC saved us from complacency.

However one interprets environmental and energy related issues, they clearly imposed on our economy heavy burdens of technical adaptation. Our industry, our transport system, our homes, and our very life styles are being retrofitted to accommodate the new costs of energy and to meet mandated environmental standards. Approximately 20 percent of all non-residential private investment is now committed to energy and environmental adaptation. Even more than the demographic changes, these changes explain the scarcity of capital, lower productivity growth, and inflation.

Government, The Great Society, and Egalitarianism

The civil rights movement, which began in the 1950s and expanded throughout the 1960s, has transformed the social, political, and economic dimensions of government. Government has moved at all levels to promote equal opportunity, equal education, equal health care, and more equal housing. Between 1960 and 1979, the share of total GNP committed to government expenditures increased from 27 percent to 33 percent. During the same period defense-related expenditures declined from 8.8 percent to 4.6 percent of GNP. Thus non-defense government expenditures increased from 18.2 percent of GNP to 28.4 percent of GNP. Although many may argue that we are still an unequal society, no one can challenge the fact that there has been massive change in the scope and character of government. Most of this change has come at the expense of an increased middleclass tax burden. These events probably have also contributed to the decline in the savings rate and to inflation. They also probably explain the rising level of social tension and the disillusionment with government on the part of the middle class, who are, after all, the most articulate part of the population.

Looking Forward to the 1980s

What does so extensive a review of the 1970s tell us about our future?

In demographics a dramatic change is underway. The number of 20 year olds will peak in 1980 and decline every year until at least the year 2000. The entire population under 30 years of age will decline in the 1980s! There will be fewer persons under 30 years of age in 1990 than there are today. But the 30 to 50 age group will expand by almost 20 million. Maturity, experience, and a more conservative adult attitude will dominate. The productivity of the work force should increase with maturity. Teenage unemployment will gradually decline, and with it the often misguided government policies which tried to cope with it in the 1970s.

Some of the more expensive areas of public expenditure should slow their rates of growth or even decline. The school population will decline significantly. Crime should decline. About 80 percent of all violent crimes are committed by persons under 25. Community mental health, alcoholism, drug abuse, and other such high cost programs should moderate in cost as the young adult population declines.

Politically, the social programs or the transfer payments launched in the 1960s and 1970s are not likely to be eliminated, nor will they be cut back (except for some possible natural demographic effects noted earlier). But the changed political mood suggests that new initiatives will be difficult to promote. Even some form of national health insurance, which probably will come, will not make significant impact. About 90 percent of all hospital expenditures are already covered by third-party payments (public or private). So, demographics offer some hope of a relative decline in government as a share of the economy.

The demographics also hold out the prospect of smaller families, a slowing of the growth rate of new households, and smaller houses. Whereas the 1970s had an increase of 17 million households, the 1980s is likely to have an increase of only 12 million. And the most common type of household in the 1980s will be a couple in their mid-to-late thirties, both working, with one or no children. That should reduce the relative importance of residential construction in the total economy. By the *late* 1980s, both the number of housing units and the size of housing units are likely to be smaller than in the 1970s.

The changed age composition and size of households should lead to a small reduction in consumer expenditures as a share of total output. This is especially likely if government policies shift to favor, rather than punish, savings.

The combined effect of a slower rate of growth in government and consumer expenditures should give a slightly higher percentage of output devoted to savings and investment, especially productivity improving industrial investment. Over the decade it is reasonable to expect private business investment as a share of GNP to grow between one and two percentage points. That would compensate for some of the adverse environmental and energy related effects on productivity which were experienced in the 1970s.

Environmental regulation is also likely to be eased. In the short run, there seems no alternative to increased use of coal and coal derivatives. That cannot be achieved without some easing of environmental restraints.

All of these adjustments should increase the rate of productivity gains. In the 1960s output per man-hour increased at over 3 percent per year compounded. In the late 1960s and early 1970s this improvement factor dropped to 2 percent per year. By 1977 and 1978 it had declined to 1 percent per year; and in 1979 productivity actually declined. It seems reasonable to expect productivity gains between 1 and 2 percent per year in the 1980s. When combined with modest growth of the labor force (perhaps a little over 1 percent per year), the effect should be to produce a real growth rate in the economy of 2.5 to 3.0 percent per year. That is less well than it did in the 1960s but about as well as it did in the 1970s. And in the 1980s it will be done with less dependence on labor force growth *and* less population growth. Although it sounds somewhat like a slow growth decade, it adds up to over a 30 percent expansion.

GNP is produced with energy. No matter how logical the prior discussion might seem, it must be checked against energy availability. With some modest improvement in conservation (smaller cars, smaller houses, some increase in use of public transport, industrial redesign, etc.), we should be able to do more conservation. I will use as a reasonable goal, 25 percent increase in energy in the decade 1980-1990.

Best estimates of experts place 1980 energy use in the United States at about 80 quadrillion BTUs (80 quads). It is distributed by source as follows:

	Quads
Oil	
Domestic	18
Imports	19
Gas	
Domestic	18
Imports	2
Uranium	4
Hydro	4
Coal	15
TOTAL	80

A 25 percent increase in energy use requires moving to 100 quads per year. Can it be done? There are reasonable scenarios leading to an affirmative answer. There is no time for dramatic new sources in one decade. Lead times are very long in nuclear and synfuel sources. But with decontrol of prices and a not-too-punitive "windfall tax," domestic oil and gas production may be held near present levels. Oil imports can be held near present levels. If one assumes very little additional nuclear or hydro power, that puts the entire burden of 20 quads on domestic coal and gas imports. By the end of the decade, Alaskan, Canadian, and Mexican gas should be able to supply an additional 5 quads. The gas is there; the technology is available; and the policies to secure it are falling into place. More difficult, but possible, are the policies and the capital to double coal contribution from 15 to 30 quads.

A feasible energy scenario is available—absent war or chaos in the Middle East, and given government recognition of the problems to be overcome. Energy will rise in price faster than other goods and services, but not at prohibitive rates. The best guess is that by 1990 reduced size and improved fuel efficiency will almost offset price increases for gasoline so that the real cost of driving a car will be no greater than in 1980 *and* that auto operation will be a smaller share of family income than it is today.

In spite of the problems and without divine intervention we should continue to be a society getting richer. We

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The Economies of the Eighties—A Preview

(Continued from page 3)

will become a society and a market dominated by affluent adults. The growth should be spread widely among the capital goods industries that build the tools to achieve the needed environmental and energy transformations. Wealthy adults will indulge in ever more expensive consumer durables that entertain them and do their work for them. And they will travel, recreate, and expand their use of purchased services. Only non-durable soft goods are likely to lag—these adults will have few children to feed or clothe.

What the 1980s promise is a further expansion of the middle class capable of emulating the upper classes. Homes and cars will be smaller and more fuel efficient. They also will be more luxurious. But our basic patterns of living will not be strange and different. By the end of this century we probably will need major technical breakthroughs to maintain our standard of living. But for one more decade we can get by with a lowered birth rate and a little tinkering with existing technologies and resources.

PAUL G. CRAIG *is Professor, Department of Economics and School of Public Administration, The Ohio State University. This article was adapted from a speech presented by him at the Annual Conference of the American Institute of Industrial Engineers on February 21, 1980.*

BULLETIN OF BUSINESS RESEARCH

STATISTICAL SUMMARY

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Business Conditions in Ohio and the United States

ITEM	OHIO					UNITED STATES				
				Change From					Change From	
				Last Month	Last Year				Last Month	Last Year
	Unit or Index Base Period	Jan. 1980 (p)	Dec. 1979 (r)	Jan. 1980 from Dec. 1979	Jan 1980 from Jan. 1979	*Unit or Index Base Period*	Jan. 1980 (p)	Dec. 1979 (r)	Jan. 1980 from Dec. 1979	Jan. 1980 from Jan. 1979
GENERAL BUSINESS				%	%				%	%
• Bank Debits[5, 11]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	*Bil. $ Ex.NY[d, h]*	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Number[12]	*Number*	n.a.	n.a.	n.a.	n.a.	*Number*	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Liabilities[12]	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.
Life Insurance Sales[6]	*1967*	289	364	— 21	+ 13	*1967*	312	412	— 24	+ 15
INCOME										
• Total Personal Income[1, 13]	*Mil. Dol.[d, h]*	98,583	98,015	+ 1	+ 9	*Bil. Dol.[d, h]*	2,045	2,028	+ 1	+ 11
Salaries & Wages Income[7, 13]	*Mil. Dol.[d, h]*	c	c	— 1	— x	*Bil. Dol.[d, h]*	1,291	1,283	+ 1	+ 10
Nonagricultural Income[13]		b	b	b	b	*Bil. Dol.[d, h]*	1,995	1,976	+ 1	+ 12
Employee Earn.—Gross Wkly.: Mfgr.[14, 15]	*Dollars*	331.30	343.09	— 3	+ 2	*Dollars*	277.31	285.36	— 3	+ 7
" " Const.[14, 15]	*Dollars*	437.34	437.21	+ x	+ 11	*Dollars*	334.50	354.68	— 6	+ 8
Agr. Income (Cash Mktgs.)[16, 17]	*1957–59*	n.a.	n.a.	n.a.	n.a.	*1967*	n.a.	n.a.	n.a.	n.a.
EMPLOYMENT & UNEMPLOYMENT										
Civilian Labor Force[14, 15]	*Thousands*	4,994	5,110	— 2	— x	*Thousands*	103,188	103,884	— 1	+ 2
Civilian Employment[14, 15]	*Thousands*	4,645	4,842	— 4	— x	*Thousands*	96,145	98,047	— 2	+ 2
Nonagricultural Employment[14, 15]	*Thousands*	4,413	4,534	— 3	+ x	*Thousands*	93,363	95,052	— 2	+ 2
Mfg. Prod. Employment[7, 15]	*1967*	76	78	— 2	— 9	*1967*	103	104	— 1	— 1
• Mfg. Prod. Payrolls[7, 15]	*1967*	173	184	— 6	— 8	*1967*	248	259	— 4	+ 5
Average Weekly Hours—Mfg. Prod.[7, 15]	*Number*	40.7	42.2	— 4	— 4	*Number*	39.9	41.0	— 3	— x
Unemployment, Total—No.[14, 15]	*Thousands*	349	268	+ 30	+ 5	*Thousands*	7,043	5,836	+ 21	+ 10
Unemployment, Total—Rate[14, 15]	*Percent*	7.0	5.2			*Percent*	6.8	5.6		
Unemployment, Insured[14, 15]	*Thousands*	205	159	+ 29	+ 53	*Thousands*	n.a.	n.a.	n.a.	n.a.
Registered for Work, O.B.E.S.[14]	*Thousands*	351	335	+ 5	+ 12		b	b	b	b
Unemployment Compensation Fund[14]	*Mil. Dol.*	435	503	— 14	+ 3		b	b	b	b
PRODUCTION										
Gross National Product (Quarterly)[13]		b	b	b	b	*Bil. Dol.[d, h]*	n.a.	n.a.	n.a.	n.a.
Industrial Production[7, 11]	*1967*	c	c	— 6	— 13	*1967[d]*	153	152	+ x	+ 1
• Steel Production[18]	*Thous. Tons*	1,521	1,419	+ 7	— 15	*Thous. Tons*	10,701	9,996	+ 7	— 4
Electric Power Production[8]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	*Mil. KWH*	n.a.	n.a.	n.a.	n.a.
Bituminous Coal Production[19]	*Thous. Tons*	3,392	3,385	+ x	+ 4	*Thous. Tons*	65,880	60,319	+ 9	+ 17
Pig Iron Production[18]	*Thous. Tons*	992	974	+ 2	— 15	*Thous. Tons*	6,583	6,372	+ 3	— 7
Machine Tools—Shipments[20]		b	b	b	b	*Mil. Dol.*	n.a.	391.05	n.a.	n.a.
Machine Tools—New Orders[20]		b	b	b	b	*Mil. Dol.*	n.a.	392.35	n.a.	n.a.
Durable Goods—New Orders[13]		b	b	b	b	*Mil. Dol.[d]*	81,495	77,751	+ 5	+ 2
CONSTRUCTION (Value of Contracts)										
• Total (Seas. Adj.)[9, 21]	*1967[d]*					*1967[d]*				
Total[9, 21]	*1967[f]*	117	135	— 14	— 9	*Mil. Dol.*	11,080	10,513	+ 5	— 6
Residential Building[9, 21]	*1967[f]*	90	107	— 16	— 6	*Mil. Dol.*	4,100	4,304	— 5	— 9
Nonresidential Building[9, 21]	*1967[f]*	114	116	— 2	— 31	*Mil. Dol.*	4,352	3,559	+ 22	+ 10
Utilities and Non-Building Const.[9, 21]	*1967[f]*	189	251	— 25	+ 75	*Mil. Dol.*	2,628	2,651	— 1	— 20
DISTRIBUTION										
Total Retail Sales[2, 13]	*1957–59[d]*	293	278	+ 5	+ 6	*Mil. Dol.[d]*	78,545	76,809	+ 2	+ 11
Department Store Sales[2, 13]	*1957–59[d]*	218	285	— 23	— 5	*Mil. Dol.[d]*	7,814	7,395	+ 6	+ 15
• New Passenger Cars Registered[3, 22]	*1967*	94	84	+ 13	— 1	*No.–49 sts.*	749,305	831,319	— 10	— 1
New Trucks Registered[3, 22]	*No.–43 cos.*	4,699	4,713	— x	— 32		n.a.	265,235	n.a.	n.a.
Used Cars Registered[3]	*No.–33 cos.*	30,552	25,623	+ 19	+ 14		b	b	b	b
PRICES										
• Consumer Price Index[15]:										
All Urban Consumers		b	b	b	b	*1967*	233	230	+ 1	+ 14
Wage Earners & Clerical Workers		b	b	b	b	*1967*	233	230	+ 1	+ 14
Producer Price Index[15]:										
All Commodities		b	b	b	b	*1967*	255	249	+ 2	+ 15
Finished Goods		b	b	b	b	*1967*	232	228	+ 2	+ 13
Intermediate Materials		b	b	b	b	*1967*	266	258	+ 3	+ 18
Crude Materials		b	b	b	b	*1967*	297	297	+ x	+ 14
Sensitive Indus. Commodities[15]		b	b	b	b	*1967*	316	310	+ 2	+ 22
BANKING AND FINANCE										
• Bank Loans, Large Banks—Total[11]	*Mil. Dol.*	24,378	23,529	+ 4	+ 17	*Mil. Dol.*	409,652	404,898	+ 1	+ 17
" " " " Bus. & Agric.[11]	*Mil. Dol.*	8,845	8,608	+ 3	+ 19	*Mil. Dol.*	161,967	159,533	+ 2	+ 19
Stock Price Index—400 Indust.[23]		b	b	b	b	*1941–43 = 10*	124.9	121.4	+ 3	+ 13
" " " 40 Utils.[23]		b	b	b	b	*1941–43 = 10*	50.6	50.7	— x	+ 1
" " " 20 Utils.[23]		b	b	b	b	*1970 = 10*	15.3	15.2	+ 1	+ 13
Yield, Corp. AAA Bonds[23]		b	b	b	b	*Percent*	10.86	10.55	+ 3	+ 17

• Indicates series charted (page S-1). For sources and footnotes, see page S-3.

Business Conditions in the 8 Largest OHIO CITIES

ITEM	Unit or Index Base Period	Jan. 1980 (p)	Dec. 1979 (r)	Change From Last Year Jan. 1980 from Jan. 1979	Jan. 1980 (p)	Dec. 1979 (r)	Change From Last Year Jan. 1980 from Jan. 1979	Jan. 1980 (p)	Dec. 1979 (r)	Change From Last Year Jan. 1980 from Jan. 1979	Jan. 1980 (p)	Dec. 1979 (r)	Change From Last Year Jan. 1980 from Jan. 1979
		AKRON			**CANTON**			**CINCINNATI**			**CLEVELAND**		
				%			%			%			%
Number Employed[7]:													
Total[w]	*1967*	83	86	— 2	93	94	— 4	77	79	— 6	90	91	— 3
Manufacturing	"	59	61	— 10	85	83	— 7	67	68	— 16	73	73	— 9
Trade, Serv., & Utils.	"	114	120	+ 4	109	112	+ 1	87	88	+ 1	110	110	+ 1
Construction	"	55	67	+ 4	73	80	— 8	73	87	+ 4	67	78	+ 2
Payrolls[7]:													
Total[w]	"	173	184	+ 1	234	228	— x	199	212	— 6	204	211	— 2
• Manufacturing	"	127	133	— 7	210	198	— [illegible]	159	174	— 19	156	166	— 16
Trade, Serv., & Utils.	"	268	284	+ 9	304	309	+ 6	254	263	+ 5	272	270	+ 10
Construction	"	120	153	+ 12	176	182	+ 12	179	211	+ 15	180	210	+ 18
Emp. Earn.—Gross Wkly.[7]:													
All Industries[w]	*$*	316.75	322.14	+ 5	328.74	317.34	+ 3	299.51	311.51	— x	351.01	361.08	+ 1
Manufacturing	"	370.14	376.30	+ 4	363.43	346.96	+ 2	323.61	344.62	— 3	365.73	389.60	— 7
Trade, Serv., & Utils.	"	241.80	245.00	+ 5	258.50	255.43	+ 4	261.89	266.76	+ 1	321.69	318.52	+9
Construction	"	415.45	435.20	+ 8	450.81	437.85	+ 11	429.39	425.20	+ 10	491.94	495.95	+ 16
Retail Sales[2]	*%*	c	c	+ 14	c	c	+ 9	c	c	+ 3	c	c	+ 5
Auto Titles[3]:													
New Cars	*No.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4,390	3,626	— 3	6,120	5,699	— 8
New Trucks	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.				714	659	— 31
Retail Food Prices[15]	*1967*	b	b	b	b	b	b	254	255	+ 6	246	246	+ 6
Bank Debits[5]	*1967*[f]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:													
Failures	*No.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	*Thous. $*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	*1967*[f]	120	136	— 11	b	b	b	b	b	b	b	b	b
Value of Bldg. Const.[9]:													
Total	"	104	84	— 19	78	43	— 55	143	156	— 13	45	46	— 53
Residential	"	54	54	+236	58	57	+ y	94	168	+ 59	35	36	— 41
Nonresidential	"	154	115	— 36	101	26	— 73	187	145	— 28	54	55	— 58
Steel Production[18]	*1967*[g]	b	b	b	b	b	b						
Labor Force Estimates[14]:													
Civilian Labor Force	*Thous.*	242	246	+ 1	172	174	+ 2	418	443	— 2	735	764	— 2
Civilian Employment	"	225	233	x	160	164	+ 2	395	424	— 1	693	727	— 2
Unemp. Total—No.	"	17.4	13.1	+ 8	11.9	9.9	+ 3	23.4	19.8	— 13	42.2	36.0	+ 3
Unemp., Total—Rate	*%*	7.2	5.3		6.9	5.7		5.6	4.5		5.7	4.7	
		COLUMBUS			**DAYTON**			**TOLEDO**			**YOUNGSTOWN**		
				%			%			%			%
Number Employed[7]:													
Total[w]	*1967*	106	113	— 1	105	108	— 1	97	100	— 6	84	87	— 3
Manufacturing	"	74	75	— 9	69	70	— 6	73	76	— 18	55	57	— 11
Trade, Serv., & Utils.	"	131	142	+ 1	161	163	+ 2	122	123	+ x	123	126	+ 1
Construction	"	63	74	+ 14	70	95	+ 14	69	84	+ 39	54	57	— 8
Payrolls[7]:													
Total[w]	"	246	260	+ 4	210	217	+ 1	221	238	— 6	185	195	— 1
• Manufacturing	"	159	168	— 8	154	161	— 5	156	177	— 23	128	[illegible]	— 11
Trade, Serv., & Utils.	"	335	352	+ 7	341	343	+ 6	320	326	+ 6	299	[illegible]	+ 10
Construction	"	146	176	+ 34	164	213	+ 25	171	209	+ 57	143	154	— 8
Emp. Earn.—Gross Wkly.[7]:													
All Industries[w]	*$*	275.76	276.89	+ 5	353.07	358.46	+ 2	330.77	344.74	+ 3	303.48	305.67	+ 2
Manufacturing	"	334.85	345.83	+ 3	392.13	404.48	+ x	360.91	392.49	— 4	332.66	336.81	— 2
Trade, Serv., & Utils.	"	225.08	219.45	+ 5	289.48	287.13	+ 5	280.66	283.59	+ 9	242.89	242.78	+ 9
Construction	"	392.42	399.10	+ 18	412.29	401.31	+ 10	519.11	488.13	+ 17	488.59	490.66	— x
Retail Sales[2]	*%*	c	c	— 1	c	c	— 2	c	c	— 2	c	c	+ 5
Auto Titles[3]:													
New Cars	*No.*	3,551	3.450	— 14	2,613	2.377	— 4	2,062	1,722	+ 10	965	799	— 5
New Trucks	"	653	570	— 29	302	324	— 44	297	314	— 37	165	119	— 1
Retail Food Prices[15]	*1967*	b	b	b	b	b	b	b	b	b	b	b	b
Bank Debits[5]	*1967*[f]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:													
Failures	*No.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	*Thous. $*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	*1967*[f]	b	b	b	b	b	b	150	141	— 9	83	88	— 12
Value of Bldg. Const.[9]:													
Total	"	176	156	+ 52	102	83	+ 46	67	122	— 14	43	110	— 22
Residential	"	129	238	+ 36	29	60	— 62	107	124	— 20	39	143	— 53
Nonresidential	"	223	74	+ 63	194	111	+209	46	121	— 4	46	72	+130
Steel Production[18]	*1967*[g]	b	b	b	b	b	b	b	b	b			
Labor Force Estimates[14]:													
Civilian Labor Force	*Thous.*	428	450	— 1	269	277	+ x	219	228	— 1	130	135	— 2
Civilian Employment	"	408	434	+ x	251	262	— 1	200	214	— 3	118	126	— 2
Unemp. Total—No.	"	19.9	16.6	— 12	18.2	14.1	+ 18	19.0	14.2	+ 15	11.6	8.8	+ 5
Unemp., Total—Rate	*%*	4.7	3.7		6.7	5.1		8.6	6.2		8.9	6.5	

NOTE: All data are for county areas except bank debits and commercial failures, which are for areas within city limits. The indexes of number employed and payrolls and the employee weekly earnings are based on data for production workers in manufacturing, construction workers in contract construction, and nonsupervisory employees in other categories which exclude agriculture, government, education, and public institutions.

• Indicates series charted (page S-3). For sources and footnotes, see page S-3.

Number Employed, Payrolls, and Man-Hours in Ohio Industry

INDUSTRIAL GROUP	NUMBER EMPLOYED[7]				PAYROLLS[7]				MAN-HOURS[7]			
	Index (1967 = 100)		Change		Index (1967 = 100)		Change		Index (1967 = 100)		Change	
	Jan. 1980 (p)	Dec. 1979 (r)	Jan. 1980 from Dec. 1979	Jan. 1980 from Jan. 1979	Jan. 1980 (r)	Dec. 1979 (p)	Jan. 1980 from Dec. 1979	Jan. 1980 from Jan. 1979	Jan. 1980 (p)	Dec. 1979 (r)	Jan. 1980 from Dec. 1979	Jan. 1980 from Jan. 1979
			%	%			%	%			%	%
Total[w] (2,405)[a]	**87**	**91**	**— 4**	**— 3**	**194**	**206**	**— 6**	**— x**	**84**	**90**	**— 7**	**— 5**
All Manufacturing[w] (1,311)	**76**	**78**	**— 2**	**— 9**	**173**	**184**	**— 6**	**— 8**	**70**	**74**	**— 6**	**— 13**
Chemicals (69)	97	96	+ x	— 2	185	211	— 12	— 12	84	93	— 10	— 13
Food Products (89)	80	82	— 3	— 2	195	205	— 5	+ 7	71	74	— 4	— 2
Bakery	71	73	— 2	+ 5	169	178	— 5	+ 16	67	71	— 5	+ 9
Miscellaneous	81	83	— 3	— 2	198	208	— 5	+ 6	71	74	— 4	— 3
Lumber Products (45)	89	91	— 2	— 13	181	188	— 3	— 4	81	83	— 3	— 12
Furniture	98	99	— 1	— 14	200	206	— 3	— 5	93	95	— 1	— 13
Miscellaneous	75	78	— 4	— 8	152	160	— 5	— 3	62	66	— 6	— 9
Machinery (304)	76	76	— x	— x	167	175	— 5	+ 5	72	75	— 4	— 3
Elec. Mach., Apparatus and Supplies	86	86	— x	+ 3	194	209	— 7	+ 6	80	85	— 6	— 1
Machine Tools	62	62	+ 1	— 3	150	148	+ 2	+ 9	66	66	+ 1	— 2
Agricultural Equipment	50	49	+ 1	— 3	118	115	+ 3	+ 11	57	57	+ x	— 3
Special Machinery and Appliances	70	71	— 1	— 4	144	150	— 4	+ 1	66	68	— 4	— 7
Metal Products (358)	83	85	— 2	— 10	190	196	— 3	— 9	74	77	— 4	— 14
Foundry Products and Drop Forgings	93	91	+ 3	— 13	223	245	— 9	— 17	76	80	— 5	— 18
Pipes, Valves, and Plumbers' Supplies	85	84	+ 1	— 3	204	220	— 7	— 6	88	95	— 6	— 14
Screw Machine Products and Hdwe.	92	95	— 2	— 7	172	183	— 6	— 7	89	96	— 7	— 13
Sheet Metal Work	84	90	— 7	— 18	178	211	— 16	— 20	68	79	— 15	— 23
Steel Works and Rolling Mills	77	77	+ x	— 6	177	167	+ 6	— 5	71	69	+ 3	— 13
Stoves and Furnaces	91	89	+ 2	— 19	188	212	— 11	— 6	95	108	— 12	— 17
Miscellaneous	80	84	— 4	— 9	184	192	— 4	— 5	70	74	— 4	— 10
Paper and Printing (139)	65	66	— 1	— 5	165	171	— 4	+ 3	61	63	— 3	— 6
Paper and Pulp	49	48	+ 1	— 1	163	161	+ 1	+ 10	41	41	+ 1	— x
Printing and Publishing	74	75	— 1	— 6	166	174	— 4	— 1	68	70	— 3	— 4
Miscellaneous	65	67	— 2	— 6	160	169	— 5	+ 1	67	71	— 5	— 8
Rubber Products (54)	66	67	— 1	— 11	161	159	+ 1	— 9	61	61	+ x	— 15
Tires and Tubes	49	50	— 2	— 6	106	107	— x	— 7	37	37	— 1	— 12
Miscellaneous	76	76	— 1	— 13	204	201	+ 1	— 11	81	80	+ 1	— 17
Stone, Clay, and Glass Products (94)	74	75	— 1	— 8	184	189	— 3	— 3	80	83	— 3	— 9
Brick and Tile	54	58	— 7	— 10	107	121	— 12	— 6	53	60	— 12	— 13
Glass	80	80	— x	— 13	187	189	— 1	— 7	81	82	— 1	— 12
Vitreous & Semi-Vit. China & Pottery	56	57	— 1	— 1	169	169	— x	+ 11	87	88	— 1	— 1
Miscellaneous	84	86	— 2	— 3	207	221	— 7	+ x	85	91	— 7	— 8
Textiles (37)	71	72	— 2	— 7	107	113	— 5	— 8	68	72	— 6	— 12
Men's Clothing	81	81	— x	— 4	106	112	— 5	— 8	69	74	— 6	— 14
Miscellaneous	65	67	— 3	— 9	112	119	— 6	— 8	68	72	— 6	— 11
Vehicles (62)	68	76	— 11	— 29	158	193	— 18	— 37	59	72	— 18	— 38
Autos and Parts	72	82	— 13	— 36	172	217	— 21	— 43	61	77	— 21	— 44
Cars, Electric and Steam Railway	115	122	— 6	+ 9	253	256	— 1	+ 9	104	107	— 2	+ 7
Miscellaneous	60	60	+ x	+ 27	132	139	— 5	+ 34	59	62	— 4	+ 21
Miscellaneous Manufacturing (60)	64	66	— 2	— 7	147	153	— 4	+ 5	61	64	— 4	— 6
Total Trade, Service, and Utilities[w] (717)	**103**	**108**	**— 4**	**+ 1**	**234**	**244**	**— 4**	**+ 8**	**105**	**113**	**— 7**	**+ 2**
Service (212)	119	118	+ 1	+ 4	249	243	+ 2	+ 12	131	132	— 1	+ 4
Trade, Retail and Wholesale (396)	93	102	— 9	+ x	205	225	— 9	+ 5	91	103	— 12	+ 1
Transportation & Public Utilities (109)	108	108	— x	— x	294	296	— 1	+ 7	107	108	— 1	— 2
Construction (349)	**61**	**74**	**— 17**	**+ 9**	**156**	**187**	**— 17**	**+ 27**	**56**	**68**	**— 18**	**+ 19**
Mines and Quarries (28)	**124**	**125**	**— 1**	**— 2**	**264**	**261**	**+ 1**	**+ 7**	**75**	**77**	**— 2**	**— 3**

Indexes of number employed and of payrolls are based on the employment of 506,432 persons (production workers in manufacturing and mining, construction workers in contract construction, and nonsupervisory employees in other categories) in 2,405 firms; indexes of man-hours, on the employment of 492,498 production workers and nonsupervisory employees in 2,305 firms. Figures in parentheses show number of firms reporting employment and payrolls. In some cases fewer firms report man-hours. Data do not include agriculture, government, education, or public institutions. For sources and footnotes, see below.

FOOTNOTES FOR BULLETIN TABLES AND CHARTS

†Change in number of failures: [a]Figures in parentheses show number of firms reporting this month; [n.a.]Current data not available; [b]Comparable data not available; [c]Only percentage of change available; [d]Adjusted for seasonal change; [f]Adjusted for number of working days; [g]Four weeks average; [h]Annual rate; [p]Preliminary; [r]Revised; [s]Series revised; [w]Weighted; [x]Less than 0.5 percent; [y]More than 1,000 percent increase.

Primary Sources:

Computed from: [1]Center for Business and Economic Research multiple regression model.

Computed from original data collected by the Center for Business and Economic Research from: [2]Ohio retailers; [3]County Clerks of Courts; [4]Local Power and Light Companies.

Computed by the Center for Business and Economic Research from data supplied by: [5]Board of Governors of the Federal Reserve System; [6]Life Insurance Marketing and Research Association; [7]Division of Research and Statistics of the Ohio Bureau of Employment Services, collected in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor; [8]Federal Power Commission; [9]F. W. Dodge Division, McGraw-Hill Information Systems Company; [10]Dun & Bradstreet, Inc.

Other data sources: [11]Federal Reserve Board; [12]Dun & Bradstreet, Inc.; [13]U.S. Department of Commerce; [14]Division of Research and Statistics of the Ohio Bureau of Employment Services; [15]U.S. Department of Labor; [16]Department of Agricultural Economics, O.S.U.; [17]U.S. Department of Agriculture; [18]American Iron and Steel Institute; [19]U.S. Department of Energy; [20]National Machine Tool Builders' Association; [21]F. W. Dodge Division, McGraw-Hill Information Systems Company; [22]R. L. Polk & Co.; [23]Standard & Poor's Corporation.

Note: In the Ohio-U.S. table, page S-2, dual source notes on a single line of the table stub refer first to Ohio data, second to U.S. data.

Ohio Retail Sales Trends

January Sales of Ohio Retailers were 24 percent lower than sales in December, but after seasonal adjustment the January sales index was 5 percent above the index for December. Compared with sales in January 1979, current January sales increased 6 percent.

By Kind of Business, the largest January-from-December declines (above 50 percent) occurred in those 8 lines with traditionally high seasonal buying in December—department stores, 4 apparel store categories, jewelry stores, florists, and State liquor stores. Eleven additional lines showed lesser decreases in January-from-December, and 5 categories had January-from-December increases, including a surprising +40 percent increase by paint, glass, and wallpaper stores, +10 percent by filling stations, +8 percent by motor vehicle dealers, +6 percent by other automotive dealers, and a fractional increase by drug stores. In comparisons with January 1979 sales, almost two-thirds of the individual lines experienced higher sales in January 1980, with increases ranging from +44 percent by paint, glass, and wallpaper stores to +2 percent by State liquor stores.

INDEXES OF OHIO RETAIL SALES

KIND OF BUSINESS	INDEX (1957–59 = 100)		CHANGE		
			Jan. 1980 from Dec. 1979		Jan. 1980 from Jan. 1979
	Jan. 1980 (p)	Dec. 1979 (r)	Not Seas. Adj.	Seas. Adj.	
			%	%	%
Total Retail Stores[2, w]	**260**	**341**	**—24**	**+ 5**	**+ 6**
Grocery Stores	315	345	— 9	+ 3	+11
Other Food Stores	397	478	—17	—13	+24
General Stores (With Food)	178	228	—22	+21	+37
Department Stores	167	552	—70	—23	— 5
Other General Merchandise	n.a.	n.a.	n.a.	n.a.	n.a.
Men's Clothing-Furns. Stores	123	273	—55	+ 3	— 3
Family Clothing Stores	89	225	—60	+ 3	—12
Women's Ready-to-Wear Stores	121	290	—58	—16	+ 5
Shoe Stores	92	183	—50	—16	+ 5
Furniture Stores	232	269	—14	+36	+15
Household Appl.–TV-Rdio Strs.	177	336	—47	— 2	— 4
Home Furnishings Stores	n.a.	n.a.	n.a.	n.a.	n.a.
Motor Vehicle Dealers	301	278	+ 8	+ 5	— 2
Other Automotive	123	116	+ 6	+13	— 3
Filling Stations	391	356	+10	+17	+ 5
Lumber–Bldg. Matls. Dealers	200	240	—17	—11	+ 7
Paint, Glass & Wallpaper Strs.	185	132	+40	+91	+44
Heat.–Plumb. & Elec. Sup. Strs.	222	299	—26	— 7	+31
Hardware Stores	190	258	—27	+43	— 7
Farm Equipment Dealers	n.a.	n.a.	n.a.	n.a.	n.a.
Eating and Drinking Places	196	238	—18	— 8	+11
Drug Stores	257	256	+ x	+34	+ 5
Jewelry Stores	158	649	—76	+ 3	+27
Florists	121	270	—55	— 8	—16
Fuel Dealers	192	202	— 5	— 3	—18
Hay–Feed, Farm & Grdn. Strs.	418	439	— 5	— 1	+19
State Liquor Stores	137	342	—60	+ 6	+ 2

For sources and footnotes, see page S-3.

By DAVID GORDON and JOE L. WELCH

Management Attitudes toward Productivity in the Office

The office appears to be the last corporate holdout against the tide of automation that has swept through the factory. In the age of electronic data processing and industrial automation, the office has been remarkably resistant to change. In fact, little has changed in the office since the development of the typewriter over 100 years ago. In 1975 it was estimated that capital investment for each U.S. office worker was only $2,000 vs. $25,000 in manufacturing and $35,000 in agriculture.[1] Recently, however, office automation emerged and promises to revolutionize office operations. While optimistic industry leaders have forecasted a jump in the annual capital expenditures per white collar worker to $10,000 or more by 1985, widespread acceptance of automated equipment in the office environment has been slow in occurring.[2]

Office automation promises to muddle management attitudes, practices, and techniques on a greater scale than did factory and plant automation. Management itself is expected to undergo considerable turmoil. For example, some suggested that management will experience the following:

- Partial skills obsolescence
- More infiltration of computer professionals
- Increased segregation of top and middle management
- Absorption of some middle management functions by top management

This article focuses its attention on the office environment and is specifically concerned with top and middle management's attitudes towards productivity within this environment. Full exploitation of present-day technology to improve productivity calls for realignment of traditional office procedures and personnel. Given predictable human resistance to change—particularly when valued personal relationships and hard-won conveniences are thought to be threatened—it is not surprising that widespread acceptance of the new technology has not yet occurred.

Measuring Attitudes toward Office Productivity

The objective was to measure management agreement and disagreement with attitudes bearing on office productivity and, thereby, to identify within the management of major U.S. corporations the pockets of relative receptivity or resistance to the changes required for improved office productivity. To accomplish the stated objective a survey was conducted in 1979 by a questionnaire mailed to a sample of magazine subscribers holding top and middle management positions in U.S. corporations.

The survey imposed no size limitations on the corporations. However, for purposes of this study top management and middle management were defined as positions that command a salary of over $50,000 per year and between $30,000 and $50,000 per year, respectively. This information was obtained through the magazine subscription qualification cards.

In order to provide a reasonably stable base for each of of the two management classifications a random sample of 240 U.S. corporations were selected. This selection resulted in 181 usable responses which represented a 75.4 percent response rate. The final survey responses were almost evenly represented by top and middle management. Of the total respondents, middle management represented 51.9 percent while top management represented the remaining 48.1 percent.

The distributed questionnaire contained a list of ten statements preceded by this instruction:

> *Please indicate the extent to which you agree or disagree with each of the statements (+3 and —3 indicate the strongest agreement or disagreement, respectively, while +1 and —1 indicate a slight agreement or disagreement, respectively).*

Traditional Orientation of Managers and Its Implications

As mentioned earlier, the underlying purpose of this survey was to permit the identification of pockets of relative support for, or resistance to, improved office productivity. Table 1, on page 6, presents the overall patterns of agreement and disagreement with each of the ten statements, ranked in order of high to low labor intensity. (This was not, of course, the order in which they were placed in the original survey instrument.) What is most apparent

(Continued on page 6)

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[1] "Good-Bye to Gal Friday?" *Forbes*, December 15, 1975, pp. 47-48.
[2] "The Office of the Future," *Business Week*, June 30, 1975, pp. 48-84.

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Management Attitudes toward Productivity in the Office

(Continued from page 5)

in the responses is the consistent lack of unanimity and the frequency of contradictory reactions to similar statements.

In broad terms, top management was found to be more resistant to change in traditional office procedures than middle management. This resistance is not altogether unforeseeable in that top management positions are most frequently commanded by people in a higher age group than that of middle management. Tried and proven ways are not easily cast aside to make way for new automated innovations. The traditional approach is overwhelmingly preferred by top management.

TABLE 1
MANAGEMENT ATTITUDES TOWARD OFFICE PRODUCTIVITY

	Statement	Level of Agreement (+) or Disagreement (—)[1]		
		Top Management	Middle Management	Combined Management
↑ Automation	• Office productvity is just as important as factory productivity.	+3.00	+2.15	+2.57
	• Office automation is inevitable at my organization.	—1.17	+0.62	—0.49
	• My responsibilities could be accomplished on a more timely basis if my secretary had more modern equipment at her disposal.	—2.33	+1.37	—0.21
	• A personal secretary is important for a manager at my level.	+1.33	—0.37	+0.36
	• My secretary is most important to me as an office manager scheduling my itinerary and answering my calls.	+2.17	+0.50	+1.21
	• Traditional boss-secretary relationships are a luxury in these days of heavy pressure on costs.	—2.17	—0.50	—1.50
	• Office efficiency and productivity would increase if personal secretaries were replaced with automated office equipment.	—3.00	—0.62	—1.79
	• I would be willing to give up my personal secretary if my typing could be done faster and more efficiently.	—3.00	—1.37	—2.07
	• Elimination of my personal secretary is justified if office costs can be reduced.	—3.00	—1.50	—2.14
Labor Intensive ↓	• It is very important that my correspondence be typed by a secretary familiar with my work.	+2.17	+2.50	+2.36

[1] On a range of +3.0, strongly agree, to —3.0, strongly disagree.

As a group, the respondents rationally acknowledge the desired goal of increased productivity and decreased costs (especially if someone else is making the sacrifice), but the line is drawn when it comes to personal sacrifice of status. Clearly, emotions overtake rational thinking in the choice between cost and status. The most pivotal consideration in this regard is change in the traditional relationships between managers and their secretaries. Three of the statements dealt directly with this issue. These were:

- Traditional boss-secretary relationships are a luxury in these days of heavy pressure on costs.
- It is very important that my correspondence be typed by a secretary familiar with my work.
- I would be willing to give up my personal secretary if my typing could be done faster and more efficiently.

Reactions to these three statements indicate the extent to which top and middle management are relatively willing to contemplate alteration of their secretarial arrangements. Top management is most adamant about losing the services of their personal secretaries. Interestingly, top management maintains this emotional desire for the traditional boss/secretary configuration regardless of the sacrifices of higher productivity and reduced costs . . . allegedly the objectives of the firm they represent.

There are several general implications which we can draw. There simply does not seem to be an appreciation of the rise in office costs. At the very least these costs have been subordinated to other values. The fact that these costs are buried in overhead, and distributed over the total organization, could have significant bearing on this view. If office costs were identified by line items and under the direct control of a manager who was responsible for them, there might be a greater appreciation of their magnitude. This could provide the incentive for employing methods which would reduce these costs.

Thus, while it is possible that top management could order sweeping organizational changes in the office environment, it seems likely that broad acceptance of current and future office technologies for the purpose of improved productivity will be hindered until top managers understand that they, too, can benefit from employing the office concepts made feasible and desirable by modern hardware.

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STATISTICAL SUMMARY

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Business Conditions in Ohio and the United States

ITEM	OHIO						UNITED STATES					
				CHANGE FROM						CHANGE FROM		
				Last Month	Last Year					Last Month	Last Year	
	Unit or Index Base Period	Feb. 1980 (p)	Jan. 1980 (r)	Feb. 1980 from Jan. 1980	Feb. 1980 from Feb. 1979	2 months 1980 from 1979	Unit or Index Base Period	Feb. 1980 (p)	Jan. 1980 (r)	Feb. 1980 from Jan. 1980	Feb. 1980 from Feb. 1979	2 months 1980 from 1979
GENERAL BUSINESS				%	%	%				%	%	%
• Bank Debits[5, 11]	1967[f]	n.a.	n.a.	n.a.	n.a.	n.a.	Bil. $ Ex.NY[d, h]	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Number[12]	Number	n.a.	n.a.	n.a.	n.a.	n.a.	Number	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Liabilities[12]	Thous. Dol.	n.a.	n.a.	n.a.	n.a.	n.a.	Thous. Dol.	n.a.	n.a.	n.a.	n.a.	n.a.
Life Insurance Sales[6]	1967	327	289	+ 13	+ 14	+ 13	1967	334	312	+ 7	+ 19	+ 17
INCOME												
• Total Personal Income[1, 13]	Mil. Dol.[d, h]	98,786	98,643	+ x	+ 9	+ 9	Bil. Dol.[d, h]	2,052	2,045	+ x	+ 11	+ 11
Salaries & Wages Income[7, 13]	Mil. Dol.[d, h]	c	c	— 1	— 1	— 1	Bil. Dol.[d, h]	1,299	1,291	+ 1	+ 9	+ 9
Nonagricultural Income[13]		b	b	b	b	b	Bil. Dol.[d, h]	2,004	1,995	+ x	+ 11	+ 12
Employee Earn.—Gross Wkly.: Mfgr.[14, 15]	Dollars	332.93	331.30	+ x	+ 3	+ 3	Dollars	277.11	276.61	+ x	+ 6	+ 6
" " Const.[14, 15]	Dollars	446.31	437.34	+ 2	+ 12	+ 12	Dollars	341.87	331.20	+ 3	+ 7	+ 7
Agr. Income (Cash Mktgs.)[16, 17]	1957–59	n.a.	n.a.	n.a.	n.a.	n.a.	1967					
EMPLOYMENT & UNEMPLOYMENT												
Civilian Labor Force[14, 15]	Thousands	4,963	4,994	— 1	— x	— x	Thousands	103,257	103,188	+ x	+ 2	+ 2
Civilian Employment[14, 15]	Thousands	4,613	4,645	— 1	— 1	— 1	Thousands	96,264	96,145	+ x	+ 2	+ 2
Nonagricultural Employment[14, 15]	Thousands	4,403	4,413	— x	+ x	+ x	Thousands	93,428	93,363	+ x	+ 2	+ 2
Mfg. Prod. Employment[7, 15]	1967	74	76	— 2	— 10	— 9	1967	103	103	+ x	— 1	— 1
• Mfg. Prod. Payrolls[7, 15]	1967	170	173	— 1	— 9	— 9	1967	248	247	+ x	+ 4	+ 4
Average Weekly Hours—Mfg. Prod.[7, 15]	Number	40.7	40.7	— x	— 3	— 3	Number	39.7	39.8	— x	— 1	— 1
Unemployment, Total—No.[14, 15]	Thousands	350	349	+ x	+ 7	+ 6	Thousands	6,993	7,043	— 1	+ 8	+ 9
Unemployment, Total—Rate[14, 15]	Percent	7.9	7.0				Percent	6.8	6.8			
Unemployment, Insured[14, 15]	Thousands	211	205	+ 3	+ 53	+ 53	Thousands	3,730	3,740	— x	+ 16	+ 17
Registered for Work, O.B.E.S.[14]	Thousands	361	351	+ 3	+ 14	+ 13		b	b	b	b	b
Unemployment Compensation Fund[14]	Mil. Dol.	375	435	— 14	— 11	— 4		b	b	b	b	b
PRODUCTION												
Gross National Product (Quarterly)[13]		b	b	b	b	b	Bil. Dol.[d, h]	n.a.	n.a.	n.a.	n.a.	n.a.
Industrial Production[7, 11]	1967	c	c	— 2	— 13	— 13	1967[d]	153	153	+ x	+ 1	+ 1
• Steel Production[18]	Thous. Tons	1,512	1,521	— 1	— 9	— 12	Thous. Tons	10,332	10,701	— 3	— 2	— 3
Electric Power Production[8]	1967[f]	n.a.	n.a.	n.a.	n.a.	n.a.	Mil. KWH	n.a.	n.a.	n.a.	n.a.	n.a.
Bituminous Coal Production[19]	Thous. Tons	2,603	3,353	— 22	— 21	— 9	Thous. Tons	62,980	65,880	— 4	+ 17	+ 17
Pig Iron Production[18]	Thous. Tons	951	992	— 4	— 11	— 13	Thous. Tons	6,357	6,583	— 3	— 4	— 5
Machine Tools—Shipments[20]		b	b	b	b	b	Mil. Dol.	346.90	330.70	+ 5	+ 24	+ 29
Machine Tools—New Orders[20]		b	b	b	b	b	Mil. Dol.	500.10	466.90	+ 7	+ 12	+ x
Durable Goods—New Orders[13]		b	b	b	b	b	Mil. Dol.[d]	81,877	82,033	— x	+ 1	+ 2
CONSTRUCTION (Value of Contracts)												
• Total (Seas. Adj.)[9, 21]	1967[d]						1967[d]					
Total[9, 21]	1967[f]	186	117	+ 59	+ 36	+ 14	Mil. Dol.	10,394	11,080	— 6	— 25	— 16
Residential Building[9, 21]	1967[f]	98	90	+ 9	— 27	— 18	Mil. Dol.	4,337	4,100	+ 6	— 5	— 8
Nonresidential Building[9, 21]	1967[f]	261	114	+ 130	+ 137	+ 36	Mil. Dol.	3,635	4,352	— 16	+ 12	+ 11
Utilities and Non-Building Const.[9, 21]	1967[f]	197	189	+ 4	— 9	+ 19	Mil. Dol.	2,422	2,628	— 8	— 60	— 46
DISTRIBUTION												
Total Retail Sales[2, 13]	1957–59[d]	298	293	+ 2	+ 8	+ 7	Mil. Dol.[d]	78,209	79,464	— 2	+ 10	+ 11
Department Store Sales[2, 13]	1957–59[d]	251	218	+ 15	+ 5	+ 1	Mil. Dol.[d]	7,685	7,851	— 2	+ 14	+ 15
• New Passenger Cars Registered[3, 22]	1967	90	95	— 5	+ 3	+ x	No.–49 sts.	698,413	749,305	— 7	— 8	— 5
New Trucks Registered[3, 22]	No.–41 cos.	3,324	4,432	— 25	— 34	— 33	No.–45 sts.	208,923	232,409	— 10	— 24	— 21
Used Cars Registered[3]	No.–33 cos.	24,891	24,389	+ 2	+ 20	+ 17		b	b	b	b	b
PRICES												
• Consumer Price Index[15]:												
All Urban Consumers		b	b	b	b	b	1967	236	233	+ 1	+ 14	+ 14
Wage Earners & Clerical Workers		b	b	b	b	b	1967	237	232	+ 1	+ 14	+ 14
Producer Price Index[15]:												
All Commodities		b	b	b	b	b	1967	260	255	+ 2	+ 16	+ 16
Finished Goods		b	b	b	b	b	1967	235	232	+ 1	+ 13	+ 13
Intermediate Materials		b	b	b	b	b	1967	271	266	+ 2	+ 19	+ 18
Crude Materials		b	b	b	b	b	1967	308	297	+ 4	+ 14	+ 14
Sensitive Indus. Commodities[15]		b	b	b	b	b	1967	323	316	+ 2	+ 18	+ 20
BANKING AND FINANCE												
• Bank Loans, Large Banks—Total[11]	Mil. Dol.	25,381	24,378	+ 4	+ 21	+ 19	Mil. Dol.	412,231	409,652	+ 1	+ 15	+ 16
" " " " Bus. & Agric.[11]	Mil. Dol.	9,051	8,845	+ 2	+ 20	+ 19	Mil. Dol.	164,712	161,967	+ 2	+ 19	+ 19
Stock Price Index—400 Indust.[23]		b	b	b	b	b	1941–43 = 10	132.4	124.9	+ 6	+ 20	+ 16
" " " 40 Utils.[23]		b	b	b	b	b	1941–43 = 10	48.7	50.6	— 4	— 4	— 2
" " " 20 Trans.[23]		b	b	b	b	b	1970 = 10	17.3	15.3	+ 13	+ 31	+ 22
Yield, Corp. AAA Bonds[23]		b	b	b	b	b	Percent	12.88	10.86	+ 19	+ 39	+ 28

• Indicates series charted (page S-1). For sources and footnotes, see page S-3.

Business Conditions in the 8 Largest OHIO CITIES

ITEM	Unit or Index Base Period	Feb. 1980 (p)	Jan. 1980 (r)	Change From Last Year: Feb. 1980 from Feb. 1979	Change From Last Year: 2 months 1980 from 1979	Feb. 1980 (p)	Jan. 1980 (r)	Change From Last Year: Feb. 1980 from Feb. 1979	Change From Last Year: 2 months 1980 from 1979	Feb. 1980 (p)	Jan. 1980 (r)	Change From Last Year: Feb. 1980 from Feb. 1979	Change From Last Year: 2 months 1980 from 1979	Feb. 1980 (p)	Jan. 1980 (r)	Change From Last Year: Feb. 1980 from Feb. 1979	Change From Last Year: 2 months 1980 from 1979
		AKRON				**CANTON**				**CINCINNATI**				**CLEVELAND**			
				%	%			%	%			%	%			%	%
Number Employed[7]:																	
Total[w]	1967	75	83	—10	—6	92	93	—3	—3	75	77	—8	—7	90	90	—3	—3
Manufacturing	"	57	59	—12	—11	86	85	—5	—6	64	67	—19	—17	73	73	—9	—9
Trade, Serv., & Utils.	"	100	114	—9	—2	107	109	—x	+x	87	87	+1	+1	109	110	+x	+1
Construction	"	47	55	+7	+5	66	73	—15	—11	69	73	+1	+3	64	67	+3	+3
Payrolls[7]:																	
Total[w]	"	159	173	—6	—2	237	234	+2	+1	195	199	—8	—7	205	204	—1	—1
• Manufacturing	"	121	127	—10	—8	219	210	—x	—2	153	159	—20	—20	158	156	—13	—14
Trade, Serv., & Utils.	"	238	268	—3	+3	299	304	+6	+6	252	254	+3	+4	273	272	+9	+9
Construction	"	108	120	+14	+13	155	176	+1	+7	172	179	+14	+15	172	180	+20	+19
Emp. Earn.—Gross Wkly.[7]:																	
All Industries[w]	$	317.59	316.75	+4	+4	332.13	328.74	+4	+4	302.29	299.51	+1	+x	356.87	351.01	+3	+2
Manufacturing	"	366.58	370.14	+3	+4	368.79	363.43	+3	+2	329.50	323.61	+1	—1	376.42	365.73	—3	—5
Trade, Serv., & Utils.	"	246.72	241.80	+6	+6	260.53	258.50	+6	+5	260.68	261.89	—1	—x	323.08	321.69	+9	+9
Construction	"	432.56	415.45	+7	+7	439.11	450.81	+9	+10	441.00	429.39	+13	+12	494.13	491.94	+16	+16
Retail Sales[2]	%	c	c	+7	+10	c	c	+5	+7	c	c	+4	+4	c	c	+2	+2
Auto Titles[3]:																	
New Cars	No.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4.119	4,390	—2	—2	5,666	6,120	—6	—7
New Trucks	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	553	680	—31	—27	663	659	—21	—26
Retail Food Prices[15]	1967	b	b	b	b	b	b	b	b	257	254	+5	+6	249	246	+5	+5
Bank Debits[5]	1967[f]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	No.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	Thous. $	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	1967[f]	145	120	—8	—10	b	b	b	b	b	b	b	b	b	b	b	b
Value of Bldg. Const.[9]:																	
Total	"	51	104	—61	—40	160	78	+103	—6	149	143	+36	+6	233	45	+282	+77
Residential	"	48	54	—62	—28	73	58	—37	+9	91	94	—41	—14	50	35	+1	—22
Nonresidential	"	53	154	—61	—45	266	101	+717	—11	201	187	+194	+18	399	54	+460	+127
Steel Production[18]	1967[g]	b	b	b	b	b	b	b	b	87	88	—21	—17	121	123	—5	—2
Labor Force Estimates[11]:																	
Civilian Labor Force	Thous.	239.3	242.1	+x	+1	172.0	172.3	+2	+2	415.4	418.3	—2	—2	730.2	735.1	—2	—2
Civilian Employment	"	221.5	224.8	—x	—x	159.3	160.4	+1	+2	391.9	394.9	—2	—2	688.9	692.9	—2	—2
Unemp. Total—No.	"	17.7	17.4	+10	+9	12.7	11.9	+13	+8	23.5	23.4	—7	—10	41.3	42.2	+1	+2
Unemp., Total—Rate	%	7.4	7.2			7.4	6.9			5.7	5.6			5.7	5.7		
		COLUMBUS				**DAYTON**				**TOLEDO**				**YOUNGSTOWN**			
				%	%			%	%			%	%			%	%
Number Employed[7]:																	
Total[w]	1967	102	106	—2	—2	103	105	—1	—1	94	97	—9	—7	82	84	—4	—4
Manufacturing	"	72	74	—7	—8	68	69	—8	—7	68	73	—25	—21	53	55	—10	—10
Trade, Serv., & Utils.	"	126	131	—1	—x	160	161	+3	+2	120	122	+x	+x	121	123	+x	+1
Construction	"	63	63	+22	+18	61	70	+11	+13	70	69	+41	+40	47	54	—12	—10
Payrolls[7]:																	
Total[w]	"	240	246	+5	+4	207	210	+3	+2	216	221	—7	—6	189	185	+2	+1
• Manufacturing	"	158	159	—4	—6	150	154	—6	—6	141	156	—30	—27	135	128	—4	—8
Trade, Serv., & Utils.	"	326	335	+7	+7	345	341	+12	+9	321	320	+7	+6	301	299	+11	+10
Construction	"	147	146	+39	+37	147	164	+22	+24	195	171	+75	+66	131	143	—16	—12
Emp. Earn.—Gross Wkly.[7]:																	
All Industries[w]	$	280.63	275.76	+7	+6	354.13	353.07	+4	+3	330.58	330.77	+3	+3	318.34	303.48	+5	+3
Manufacturing	"	342.59	334.85	+5	+4	389.30	392.13	+1	+x	355.40	360.91	—5	—4	358.76	332.66	+4	+1
Trade, Serv., & Utils.	"	228.97	225.08	+7	+6	294.62	289.48	+10	+7	283.82	280.66	+11	+10	246.30	242.89	+11	+10
Construction	"	390.78	392.42	+16	+17	427.57	414.29	+11	+11	532.50	519.11	+17	+17	490.33	488.59	—8	—4
Retail Sales[2]	%	c	c	+9	+3	n.a.	n.a.	n.a.	n.a.	c	c	+11	+2	c	c	+4	+4
Auto Titles[3]:																	
New Cars	No.	3,898	3,551	+13	—1	2,369	2,613	+6	+x	1,844	2,062	n.a.	n.a.	973	965	+x	—3
New Trucks	"	637	653	—8	—20	79	302	—82	—61	227	297	n.a.	n.a.	157	165	—33	—19
Retail Food Prices[15]	1967	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
Bank Debits[5]	1967[f]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	No.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	Thous. $	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	1967[f]	b	b	b	b	b	b	b	b	151	150	—10	—10	92	83	—11	—12
Value of Bldg. Const.[9]:																	
Total	"	166	176	—4	+19	495	102	+209	+160	199	67	+14	+5	163	43	+227	+97
Residential	"	162	129	+56	+47	30	29	—76	—71	184	107	+27	+4	20	39	—60	—56
Nonresidential	"	170	223	—29	+4	1,081	194	+421	+372	207	46	+8	+6	331	46	+585	+452
Steel Production[18]	1967[g]	b	b	b	b	b	b	b	b	b	b	b	b	72	67	—17	—20
Labor Force Estimates[11]:																	
Civilian Labor Force	Thous.	423.9	427.5	—2	—1	267.3	269.3	—1	—x	217.2	219.4	—3	—2	127.8	129.6	—2	—2
Civilian Employment	"	405.1	407.6	—1	—x	249.2	251.2	—2	—1	198.5	200.5	—4	—3	116.9	118.0	—3	—3
Unemp. Total—No.	"	18.9	19.9	—22	—18	18.1	18.2	+19	+19	18.7	19.0	+15	+15	10.8	11.6	+4	+5
Unemp., Total—Rate	%	4.5	4.7			6.8	6.7			8.6	8.6			8.5	8.9		

NOTE: All data are for county areas except bank debits and commercial failures, which are for areas within city limits. The indexes of number employed and payrolls and the employee weekly earnings are based on data for production workers in manufacturing, construction workers in contract construction, and nonsupervisory employees in other categories which exclude agriculture, government, education, and public institutions.

• Indicates series charted (page S-3). For sources and footnotes, see page S-3.

Number Employed, Payrolls, and Man-Hours in Ohio Industry

INDUSTRIAL GROUP	NUMBER EMPLOYED[7]					PAYROLLS[7]					MAN-HOURS[7]				
	INDEX (1967 = 100)		CHANGE			INDEX (1967 = 100)		CHANGE			INDEX (1967 = 100)		CHANGE		
	Feb. 1980 (p)	Jan. 1980 (r)	Feb. 1980 from Jan. 1980	Feb. 1980 from Feb. 1979	2 months 1980 from 1979	Feb. 1980 (r)	Jan. 1980 (p)	Feb. 1980 from Jan. 1980	Feb. 1980 from Feb. 1979	2 months 1980 from 1979	Feb. 1980 (p)	Jan. 1980 (r)	Feb. 1980 from Jan. 1980	Feb. 1980 from Feb. 1979	2 months 1980 from 1979
			%	%	%			%	%	%			%	%	%
Total[w] (2,378)[a]	**85**	**87**	**— 3**	**— 5**	**— 4**	**191**	**194**	**— 2**	**— 1**	**— 1**	**82**	**84**	**— 3**	**— 6**	**— 6**
All Manufacturing[w] (1,294)	**74**	**76**	**— 2**	**— 10**	**— 9**	**170**	**173**	**— 1**	**— 9**	**— 9**	**69**	**70**	**— 2**	**— 13**	**— 13**
Chemicals (68)	81	97	— 16	— 18	— 10	164	185	— 11	— 21	— 16	76	84	— 9	— 20	— 16
Food Products (88)	77	80	— 4	— 4	— 3	185	195	— 5	+ 2	+ 4	66	71	— 7	— 7	— 4
Bakery	70	71	— 2	— x	+ 2	165	169	— 2	+ 6	+ 11	65	67	— 4	— 2	+ 3
Miscellaneous	77	81	— 4	— 5	— 4	187	198	— 6	+ 1	+ 4	66	71	— 7	— 7	— 5
Lumber Products (44)	87	89	— 2	— 13	— 13	183	181	+ 1	— 3	— 3	80	81	— 1	— 12	— 12
Furniture	98	98	+ x	— 13	— 14	205	200	+ 3	— x	— 3	94	93	+ 1	— 10	— 12
Miscellaneous	70	75	— 7	— 13	— 11	148	152	— 3	— 8	— 6	58	62	— 7	— 16	— 12
Machinery (300)	75	76	— 1	— 2	— 1	167	167	— x	+ 4	+ 4	71	72	— 1	— 5	— 4
Elec. Mach., Apparatus and Supplies	83	86	— 3	— 1	+ 1	194	194	— x	+ 6	+ 6	79	80	— 1	— 2	— 2
Machine Tools	66	62	+ 6	+ 2	— x	154	150	+ 2	+ 10	+ 9	68	66	+ 3	+ x	— x
Agricultural Equipment	49	50	— 3	— 8	— 6	115	118	— 3	+ 2	+ 7	55	57	— 3	— 9	— 6
Special Machinery and Appliances	70	70	— 1	— 5	— 5	142	144	— 1	— 1	— x	64	66	— 2	— 9	— 8
Metal Products (354)	82	83	— 1	— 10	— 10	191	190	+ 1	— 9	— 9	74	74	— 1	— 14	— 14
Foundry Products and Drop Forgings	91	93	— 2	— 14	— 14	221	223	— 1	— 18	— 18	74	76	— 2	— 19	— 18
Pipes, Valves, and Plumbers' Supplies	77	85	— 9	— 12	— 7	210	204	+ 3	— 6	— 6	88	88	— 1	— 16	— 15
Screw Machine Products and Hdwe.	92	92	— 1	— 10	— 9	170	172	— 1	— 10	— 9	87	89	— 2	— 15	— 14
Sheet Metal Work	82	84	— 3	— 19	— 18	178	178	— x	— 19	— 20	67	68	— 1	— 23	— 23
Steel Works and Rolling Mills	77	77	— x	— 4	— 5	181	177	+ 2	— 3	— 4	71	71	+ x	— 11	— 12
Stoves and Furnaces	85	91	— 6	— 25	— 22	181	188	— 4	— 17	— 12	92	95	— 4	— 23	— 20
Miscellaneous	80	80	— 1	— 9	— 9	185	184	+ x	— 5	— 5	70	70	— 1	— 11	— 11
Paper and Printing (137)	64	65	— x	— 4	— 4	162	165	— 2	+ 1	+ 2	59	61	— 3	— 7	— 7
Paper and Pulp	48	49	— x	+ x	— x	159	163	— 2	+ 8	+ 9	40	41	— 3	— 3	— 2
Printing and Publishing	75	74	+ 1	— 5	— 5	167	166	+ x	— 1	— 1	67	68	— 2	— 6	— 5
Miscellaneous	65	65	— 1	— 5	— 5	155	160	— 3	— x	+ 1	65	67	— 4	— 10	— 9
Rubber Products (53)	64	66	— 3	— 13	— 12	154	161	— 4	— 13	— 11	58	61	— 5	— 18	— 16
Tires and Tubes	48	49	— 2	— 7	— 6	102	106	— 4	— 11	— 9	35	37	— 5	— 14	— 13
Miscellaneous	73	76	— 3	— 16	— 15	196	204	— 4	— 14	— 12	77	81	— 5	— 19	— 18
Stone, Clay, and Glass Products (94)	73	74	— 1	— 3	— 6	180	184	— 2	+ 4	+ x	79	80	— 2	— 3	— 6
Brick and Tile	50	54	— 7	— 13	— 11	104	107	— 3	— 6	— 6	50	53	— 5	— 15	— 14
Glass	79	80	— 1	— 2	— 8	179	187	— 4	+ 4	— 2	78	81	— 3	— x	— 7
Vitreous & Semi-Vit. China & Pottery	57	56	+ 1	— 1	— 1	171	169	+ 1	+ 8	+ 9	87	87	+ x	— 3	— 2
Miscellaneous	84	84	— x	— 3	— 3	212	207	+ 2	+ 3	+ 2	86	85	+ 2	— 5	— 7
Textiles (37)	72	71	+ 2	— 7	— 7	111	107	+ 4	— 7	— 8	70	68	+ 3	— 12	— 12
Men's Clothing	81	81	— x	— 5	— 4	108	106	+ 2	— 8	— 8	70	69	+ 1	— 14	— 14
Miscellaneous	68	65	+ 4	— 9	— 9	118	112	+ 6	— 6	— 7	72	68	+ 5	— 9	— 10
Vehicles (62)	66	68	— 3	— 30	— 30	155	158	— 2	— 36	— 37	57	59	— 2	— 37	— 37
Autos and Parts	69	72	— 3	— 37	— 36	166	172	— 3	— 43	— 43	59	61	— 4	— 44	— 44
Cars, Electric and Steam Railway	110	115	— 4	+ x	+ 5	237	253	— 6	+ 3	+ 6	97	104	— 7	— 3	+ 2
Miscellaneous	61	60	+ 1	+ 23	+ 25	141	132	+ 7	+ 38	+ 36	62	59	+ 5	+ 23	+ 22
Miscellaneous Manufacturing (57)	64	64	— x	— 7	— 7	149	147	+ 1	+ 7	+ 6	61	61	+ x	— 3	— 5
Total Trade, Service, and Utilities[w] (709)	**100**	**103**	**— 3**	**— 1**	**+ x**	**229**	**234**	**— 2**	**+ 6**	**+ 7**	**102**	**105**	**— 3**	**— 1**	**+ x**
Service (209)	119	119	— x	+ 4	+ 4	251	249	+ 1	+ 12	+ 12	132	131	+ 1	+ 5	+ 5
Trade, Retail and Wholesale (391)	87	93	— 7	— 5	— 2	192	205	— 6	+ 1	+ 3	84	91	— 8	— 5	— 2
Transportation & Public Utilities (109)	108	108	+ 1	— x	— x	296	294	+ 1	+ 8	+ 8	107	107	+ x	— 1	— 2
Construction (347)	**59**	**61**	**— 4**	**+ 11**	**+ 10**	**157**	**156**	**+ 1**	**+ 34**	**+ 30**	**55**	**56**	**— 3**	**+ 21**	**+ 20**
Mines and Quarries (28)	**122**	**124**	**— 1**	**— 2**	**— 2**	**276**	**264**	**+ 4**	**+ 11**	**+ 9**	**77**	**75**	**+ 2**	**— 1**	**— 2**

Indexes of number employed and of payrolls are based on the employment of 493,855 persons (production workers in manufacturing and mining, construction workers in contract construction, and nonsupervisory employees in other categories) in 2,378 firms; indexes of man-hours, on the employment of 480,046 production workers and nonsupervisory employees in 2,279 firms. Figures in parentheses show number of firms reporting employment and payrolls. In some cases fewer firms report man-hours. Data do not include agriculture, government, education, or public institutions. For sources and footnotes, see below.

FOOTNOTES FOR BULLETIN TABLES AND CHARTS

[†]Change in number of failures; [a]Figures in parentheses show number of firms reporting this month; n.a. Current data not available; [b]Comparable data not available; [c]Only percentage of change available; [d]Adjusted for seasonal change; [f]Adjusted for number of working days; [g]Four weeks average; [h]Annual rate; [p]Preliminary; [r]Revised; [s]Series revised; [w]Weighted; [x]Less than 0.5 percent; [y]More than 1,000 percent increase.

Primary Sources:

Computed from: [1]Center for Business and Economic Research multiple regression model.

Computed from original data collected by the Center for Business and Economic Research from: [2]Ohio retailers; [3]County Clerks of Courts; [4]Local Power and Light Companies.

Computed by the Center for Business and Economic Research from data supplied by: [5]Board of Governors of the Federal Reserve System; [6]Life Insurance Marketing and Research Association; [7]Division of Research and Statistics of the Ohio Bureau of Employment Services, collected in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor; [8]Federal Power Commission; [9]F. W. Dodge Division, McGraw-Hill Information Systems Company; [10]Dun & Bradstreet, Inc.

Other data sources: [11]Federal Reserve Board; [12]Dun & Bradstreet, Inc.; [13]U.S. Department of Commerce; [14]Division of Research and Statistics of the Ohio Bureau of Employment Services; [15]U.S. Department of Labor; [16]Department of Agricultural Economics, O.S.U.; [17]U.S. Department of Agriculture; [18]American Iron and Steel Institute; [19]U.S. Department of Energy; [20]National Machine Tool Builders' Association; [21]F. W. Dodge Division, McGraw-Hill Information Systems Company; [22]R. L. Polk & Co.; [23]Standard & Poor's Corporation.

Note: In the Ohio-U.S. table, page S-2, dual source notes on a single line of the table stub refer first to Ohio data, second to U.S. data.

Ohio Retail Sales Trends

February Sales of Ohio Retailers declined 3 percent from January sales, but after adjustment for seasonal variation the February sales index was 2 percent higher than the January index. Current February sales were 8 percent higher than sales in February 1979.

For the First Two Months of 1980, total sales were up 7 percent from two-month sales in 1979.

By Kind of Business, sales volumes reported by individual retailers were variously affected by higher prices, diverse buying patterns (from belt-tightening to buy-before-prices-go-up), customer use of credit, local economic situations, and weather conditions. The resulting comparisons of February summaries with prior months yielded less than distinct patterns for sales categories. In general, a majority of the kinds of business had February-from-January declines along with February-from-February gains. In two high volume lines, February sales comparisons were consistent—upward for department stores (+8 percent from January and +5 percent from February 1979) and downward for motor vehicle dealers (—2 percent from January and —3 percent from February 1979).

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INDEXES OF OHIO RETAIL SALES

KIND OF BUSINESS	INDEX (1957–59 = 100)		CHANGE			
			Feb. 1980 from Jan. 1980		Feb. 1980 from Feb. 1979	2 months 1980 from 1979
	Feb. 1980 (p)	Jan. 1980 (r)	Not Seas. Adj.	Seas. Adj.		
			%	%	%	%
Total Retail Stores	**252**	**260**	**— 3**	**+ 2**	**+ 8**	**+ 7**
Grocery Stores	310	315	— 2	+ 6	+17	+14
Other Food Stores	369	397	— 7	— 1	+21	+23
General Stores (With Food)	174	179	— 2	+ 2	+44	+40
Department Stores	179	167	+ 8	+15	+ 5	+ x
Other General Merchandise	231	207	+12	+11	+37	+25
Men's Clothing-Furns. Stores	99	123	—20	+ 6	+11	+ 3
Family Clothing Stores	97	[illegible]	+ 9	+25	+ 7	— 3
Women's Ready-to-Wear Strs.	102	[illegible]	—16	— 2	— 8	— 2
Shoe Stores	76	[illegible]	—17	— 1	+ 9	+ 6
Furniture Stores	215	232	— 7	— 9	+10	+12
Household Appl.-TV-Rdio. Strs.	173	177	— 3	— 2	+ 7	+ 1
Home Furnishings Stores	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Motor Vehicle Dealers	296	301	— 2	— 7	— 3	— 2
Other Automotive	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Filling Stations	331	391	—15	— 2	+ 3	+ 4
Lumber-Bldg. Matls. Dealers	183	200	— 9	+ 1	+22	+14
Paint, Glass & Wallpaper Strs.	153	185	—17	—29	+22	+33
Heat.-Plumb. & Elec. Sup. Strs.	238	222	+ 7	+33	+26	+28
Hardware Stores	181	190	— 5	— 4	+ 5	— 2
Farm Equipment Dealers	460	544	—16	—17	+28	+23
Eating & Drinking Places	190	196	— 3	+ 3	+ 4	+ 7
Drug Stores	309	257	+20	+25	+25	+15
Jewelry Stores	152	158	— 4	— x	+13	+20
Florists	205	121	+70	+63	+ 5	— 4
Fuel Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hay-Feed, Farm & Grdn. Strs.	370	418	—12	— 4	—24	— 6
State Liquor Stores	149	137	+ 9	+ 7	+ 9	+ 6

For sources and footnotes, see page S-3.

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BULLETIN OF BUSINESS RESEARCH

STATISTICAL SUMMARY

Center for Business and Economic Research
The Ohio State University

Volume LV, Number 5 • May 1980

Business Conditions in Ohio and the United States

ITEM	OHIO						UNITED STATES					
				CHANGE FROM						CHANGE FROM		
		Mar. 1980	Feb. 1980	Last Month	Last Year			Mar. 1980	Feb. 1980	Last Month	Last Year	
	Unit or Index Base Period	(p)	(r)	Mar. 1980 from Feb. 1980	Mar. 1980 from Mar. 1979	3 months 1980 from 1979	*Unit or Index Base Period*	(p)	(r)	Mar. 1980 from Feb. 1980	Mar. 1980 from Mar. 1979	3 months 1980 from 1979
GENERAL BUSINESS				%	%	%				%	%	%
• Bank Debits[5, 11]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	*Bil. $ Ex.NY[d, h]*	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Number[12]	*Number*	n.a.	n.a.	n.a.	n.a.	n.a.	*Number*	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures Liabilities[12]	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	n.a.	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	n.a.
Life Insurance Sales[6]	*1967*	359	327	+ 10	+ 8	+ 11	*1967*	379	334	+ 13	+ 11	+ 15
INCOME												
• Total Personal Income[1, 13]	*Mil. Dol.[d, h]*	99,637	98,786	+ 1	+ 9	+ 9	*Bil. Dol.[d, h]*	2,069	2,054	+ 1	+ 11	+ 11
Salaries & Wages Income[7, 13]	*Mil. Dol.[d, h]*	c	c	+ 1	— 1	— 1	*Bil. Dol.[d, h]*	1,310	1,301	+ 1	+ 9	+ 9
Nonagricultural Income[13]		b	b	b	b	b	*Bil. Dol.[d, h]*	2,024	2,006	+ 1	+ 11	+ 11
Employee Earn.—Gross Wkly.: Mfg.[14, 15]	*Dollars*	339.05	333.74	+ 2	+ 4	+ 3	*Dollars*	280.59	277.50	+ 1	+ 5	+ 6
" " Const.[14, 15]	*Dollars*	441.86	448.13	— 1	+ 6	+ 10	*Dollars*	342.22	342.47	— x	+ 3	+ 6
Agr. Income (Cash Mktgs.)[16, 17]	*1957–59*	n.a.	n.a.	n.a.	n.a.	n.a.	*1967*	n.a.	n.a.	n.a.	n.a.	n.a.
EMPLOYMENT & UNEMPLOYMENT												
Civilian Labor Force[14, 15]	*Thousands*	4,926	4,963	— 1	— 2	— 1	*Thousands*	103,351	103,257	+ x	+ 2	+ 2
Civilian Employment[14, 15]	*Thousands*	4,602	4,613	— x	— 2	— 1	*Thousands*	96,546	96,264	+ x	+ 1	+ 1
Nonagricultural Employment[14, 15]	*Thousands*	4,438	4,405	+ 1	— x	+ x	*Thousands*	93,584	93,428	+ x	+ 1	+ 2
Mfg. Prod. Employment[7, 15]	*1967*	75	74	+ 1	— 10	— 9	*1967*	102	102	+ x	— 2	— 1
• Mfg. Prod. Payrolls[7, 15]	*1967*	174	170	+ 2	— 8	— 9	*1967*	250	247	+ 1	+ 3	+ 4
Average Weekly Hours—Mfgr. Prod.[7, 15]	*Number*	40.8	40.7	+ x	— 3	— 3	*Number*	39.8	39.7	+ x	— 2	— 1
Unemployment, Total—No.[14, 15]	*Thousands*	324	350	— 7	+ 7	+ 7	*Thousands*	6,805	6,993	— 3	+ 10	+ 9
Unemployment, Total—Rate[14, 15]	*Percent*	6.6	7.0				*Percent*	6.6	6.8			
Unemployment, Insured[14, 15]	*Thousands*	198	211	— 6	+ 57	+ 55	*Thousands*	3,648	3,730	— 2	+ 25	+ 19
Registered for Work, O.B.E.S.[14]	*Thousands*	379	361	+ 5	+ 13	+ 13		b	b	b	b	b
Unemployment Compensation Fund[14]	*Mil. Dol.*	285	375	— 24	— 23	— 10		b	b	b	b	b
PRODUCTION												
Gross National Product (Quarterly)[13]		b	b	b	b	b	*Bil. Dol.[d, h]*	2,520	n.a.	n.a.	+ 10	n.a.
Industrial Production[7, 11]	*1967*	c	c	+ 1	— 13	— 13	*1967[d]*	151	152	— 1	— 1	+ x
• Steel Production[18]	*Thous. Tons*	1,600	1,512	+ 6	— 19	— 14	*Thous. Tons*	11,439	10,332	+ 11	— 9	— 5
Electric Power Production[8]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	*Mil. KWH*	n.a.	n.a.	n.a.	n.a.	n.a.
Bituminous Coal Production[19]	*Thous. Tons*	3,788	3,090	+ 23	— 15	— 7	*Thous. Tons*	67,015	62,980	+ 6	+ 2	+ 12
Pig Iron Production[18]	*Thous. Tons*	1,042	951	+ 10	— 17	— 15	*Thous. Tons*	7,115	6,357	+ 12	— 11	— 7
Machine Tools—Shipments[20]		b	b	b	b	b	*Mil. Dol.*	n.a.	346.90	n.a.	n.a.	n.a.
Machine Tools—New Orders[20]		b	b	b	b	b	*Mil. Dol.*	n.a.	500.10	n.a.	n.a.	n.a.
Durable Goods—New Orders[13]		b	b	b	b	b	*Mil. Dol.[d]*	79,135	81,877	— 3	— 5	— x
CONSTRUCTION (Value of Contracts)												
• Total (Seas. Adj.)[9, 21]	*1967[d]*						*1967[d]*					
Total[9, 21]	*1967[f]*	159	186	— 14	— 19	+ x	*Mil. Dol.*	11,286	10,394	+ 9	— 25	— 20
Residential Building[9, 21]	*1967[f]*	143	98	+ 46	— 30	— 24	*Mil. Dol.*	4,585	4,337	+ 6	— 34	— 19
Nonresidential Building[9, 21]	*1967[f]*	159	261	— 39	— 5	+ 21	*Mil. Dol.*	4,273	3,635	+ 18	+ 3	+ 7
Utilities and Non-Building Const.[9, 21]	*1967[f]*	200	197	+ 1	— 23	+ 1	*Mil. Dol.*	2,429	2,422	+ x	— 36	— 43
DISTRIBUTION												
Total Retail Sales[2, 13]	*1957–59[d]*	288	298	— 3	— 5	+ 3	*Mil. Dol.[d]*	77,223	78,209	— 1	+ 7	+ 10
Department Store Sales[2, 13]	*1957–59[d]*	281	251	+ 12	+ x	+ x	*Mil. Dol.[d]*	7,474	7,685	— 3	+ 8	+ 12
• New Passenger Cars Registered[3, 22]	*1967*	107	90	+ 19	— 21	— 9	*No.–49 sts.*	797,955	698,413	+ 14	— 13	— 8
New Trucks Registered[3, 22]	*No.–43 cos.*	4,334	3,905	+ 11	— 47	— 39	*No.–46 sts.*	219,400	208,923	+ 5	— 31	— 24
Used Cars Registered[3]	*No.–30 cos.*	28,916	24,185	+ 20	— 12	+ 5		b	b	b	b	b
PRICES												
Consumer Price Index[15]:		b	b	b	b	b						
All Urban Consumers		b	b	b	b	b	*1967*	240	236	+ 1	+ 15	+ 14
Wage Earners & Clerical Workers		b	b	b	b	b	*1967*	240	237	+ 1	+ 15	+ 14
Producer Price Index[15]:		b	b	b	b	b						
All Commodities		b	b	b	b	b	*1967*	262	260	+ 1	+ 15	+ 16
Finished Goods		b	b	b	b	b	*1967*	238	235	+ 1	+ 14	+ 13
Intermediate Materials		b	b	b	b	b	*1967*	273	271	+ 1	+ 18	+ 18
Crude Materials		b	b	b	b	b	*1967*	303	308	— 2	+ 9	+ 13
Sensitive Indus. Commodities[15]		b	b	b	b	b	*1967*	317	323	— 2	+ 10	+ 16
BANKING AND FINANCE												
• Bank Loans, Large Banks—Total[11]	*Mil. Dol.*	25,787	25,381	+ 2	+ 25	+ 21	*Mil. Dol.*	412,686	412,231	+ x	+ 15	+ 15
" " " " Bus. & Agric.[11]	*Mil. Dol.*	9,271	9,051	+ 2	+ 23	+ 21	*Mil. Dol.*	166,171	164,712	+ 1	+ 19	+ 19
Stock Price Index—400 Indust.[23]		b	b	b	b	b	*1941–43 = 10*	118.3	132.4	— 11	+ 5	+ 12
" " " 40 Utils.[23]		b	b	b	b	b	*1941–43 = 10*	45.6	48.7	— 6	— 10	— 5
" " " 20 Trans.[23]		b	b	b	b	b	*1970 = 10*	15.5	17.3	— 11	+ 14	+ 20
Yield, Corp. AAA Bonds[23]		b	b	b	b	b	*Percent*	12.49	12.88	— 3	+ 34	+ 30

• Indicates series charted (page S-1). For sources and footnotes, see page S-3.

Business Conditions in the 8 Largest OHIO CITIES

ITEM	Unit or Index Base Period	Mar. 1980 (p)	Feb. 1980 (r)	Change From Last Year: Mar. 1980 from Mar. 1979	Change From Last Year: 3 months 1980 from 1979	Mar. 1980 (p)	Feb. 1980 (r)	Change From Last Year: Mar. 1980 from Mar. 1979	Change From Last Year: 3 months 1980 from 1979	Mar. 1980 (p)	Feb. 1980 (r)	Change From Last Year: Mar. 1980 from Mar. 1979	Change From Last Year: 3 months 1980 from 1979	Mar. 1980 (p)	Feb. 1980 (r)	Change From Last Year: Mar. 1980 from Mar. 1979	Change From Last Year: 3 months 1980 from 1979
		AKRON				CANTON				CINCINNATI				CLEVELAND			
				%	%			%	%			%	%			%	%
Number Employed[7]:																	
Total[w]	1967	80	75	— 4	— 5	93	92	— 3	— 3	76	75	— 8	— 7	89	90	— 5	— 4
Manufacturing	"	57	57	— 10	— 11	86	86	— 5	— 6	65	64	— 16	— 17	71	73	— 12	— 10
Trade, Serv., & Utils.	"	111	100	+ 2	— 1	108	107	— x	+ x	87	87	— 1	+ x	109	109	— x	+ x
Construction	"	47	47	— 16	— 3	74	66	— 6	— 9	70	69	— 11	— 2	63	64	— 3	+ 1
Payrolls[7]:																	
Total[w]	"	170	159	— x	— 2	237	237	+ 1	+ 1	200	195	— 8	— 7	204	205	— 3	— 2
• Manufacturing	"	124	121	— 7	— 8	213	219	— 1	— 2	158	153	— 17	— 19	155	158	— 15	— 15
Trade, Serv., & Utils.	"	266	238	+ 7	+ 4	304	299	+ 4	+ 5	257	252	+ 1	+ 3	274	273	+ 8	+ 9
Construction	"	105	108	— 12	+ 4	178	155	+ 15	+ 10	179	172	— 1	+ 9	164	172	+ 1	+ 13
Emp. Earn.—Gross Wkly.[7]:																	
All Industries[w]	$	320.87	317.59	+ 4	+ 4	327.30	332.13	+ 3	+ 3	307.12	302.30	+ 1	+ x	356.55	356.88	+ 2	+ 2
Manufacturing	"	372.39	366.58	+ 4	+ 4	361.36	368.79	+ 3	+ 2	333.03	329.50	+ 1	— x	375.93	376.42	— 3	— 4
Trade, Serv., & Utils.	"	247.77	246.72	+ 5	+ 6	257.82	260.53	+ 3	+ 4	266.57	260.68	— 1	— x	324.84	323.08	+ 9	+ 9
Construction	"	425.15	432.56	+ 5	+ 7	451.56	439.11	+ 12	+ 11	447.64	441.00	+ 11	+ 12	474.98	494.13	+ 4	+ 12
Retail Sales[2]	%	c	c	— 4	+ 5	c	c	— 3	+ 4	c	c	+ x	+ 4	c	c	— 7	— 1
Auto Titles[3]:																	
New Cars	No.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4,473	4,119	— 19	— 9	7,160	5,606	— 20	— 13
New Trucks	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	578	553	— 58	— 41	654	663	— 45	— 34
Retail Food Prices[15]	1967	b	b	b	b	b	b	b	b	260	257	+ 6	+ 6	250	249	+ 5	+ 5
Bank Debits[5]	1967[f]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	No.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	Thous. $	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	1967[f]	137	145	— 4	— 8	b	b	b	b	b	b	b	b	b	b	b	b
Value of Bldg. Const.[9]:																	
Total	"	167	51	+ 59	— 12	102	160	— 35	— 17	152	149	+ 46	+ 17	96	233	— 15	+ 39
Residential	"	203	48	+ 35	+ 4	127	73	— 33	— 17	73	91	— 30	— 19	83	50	+ 17	— 7
Nonresidential	"	129	53	+121	— 22	71	266	— 40	— 18	223	201	+115	+ 41	108	399	— 28	+ 60
Steel Production[18]	1967[g]	b	b	b	b	b	b	b	b	90	87	— 3	— 13	126	121	— 8	— 4
Labor Force Estimates[14]:																	
Civilian Labor Force	Thous.	237.5	239.3	— 1	+ x	170.3	172.0	+ 1	+ 2	413.0	415.4	— 3	— 2	725.0	730.2	— 3	— 2
Civilian Employment	"	220.9	221.5	— 2	— 1	158.9	159.3	+ 1	+ 1	391.1	391.9	— 3	— 2	684.3	688.9	— 3	— 2
Unemp. Total—No.	"	16.6	17.7	+ 4	+ 7	11.4	12.7	+ 9	+ 9	22.0	23.5	— 4	— 8	40.7	41.3	+ 5	+ 3
Unemp., Total—Rate	%	7.0	7.4			6.7	7.4			5.3	5.7			5.6	5.7		
		COLUMBUS				DAYTON				TOLEDO				YOUNGSTOWN			
				%	%			%	%			%	%			%	%
Number Employed[7]:																	
Total[w]	1967	101	102	— 3	— 2	104	103	— 3	— 2	93	94	— 11	— 9	81	82	— 6	— 4
Manufacturing	"	71	72	— 9	— 8	68	68	— 9	— 8	65	68	— 28	— 24	51	53	— 14	— 12
Trade, Serv., & Utils.	"	125	126	— 2	— 1	160	160	+ 2	+ 2	121	120	+ x	+ x	121	121	— 1	+ x
Construction	"	63	63	+ 11	+ 15	69	61	— 4	+ 6	68	70	— 1	+ 23	45	47	— 10	— 10
Payrolls[7]:																	
Total[w]	"	241	240	+ 4	+ 4	210	207	+ 1	+ 2	216	216	— 11	— 8	183	189	+ 2	+ 1
• Manufacturing	"	156	158	— 7	— 6	154	150	— 6	— 6	138	141	— 33	— 29	128	135	— 6	— 7
Trade, Serv., & Utils.	"	328	326	+ 7	+ 7	339	345	+ 9	+ 9	331	321	+ 10	+ 8	299	301	+ 10	+ 10
Construction	"	147	147	+ 20	+ 81	169	147	+ 5	+ 16	169	195	— 8	+ 32	123	131	— 5	— 10
Emp. Earn.—Gross Wkly.[7]:																	
All Industries[w]	$	284.48	280.63	+ 7	+ 6	360.49	354.13	+ 4	+ 3	334.94	330.58	+ 2	+ 3	317.22	318.34	+ 8	+ 5
Manufacturing	"	343.67	342.59	+ 4	+ 4	403.63	389.30	+ 2	+ 1	360.92	355.40	— 5	— 4	357.46	358.76	+ 9	+ 3
Trade, Serv., & Utils.	"	234.84	228.97	+ 9	+ 7	288.79	294.62	+ 7	+ 7	293.56	283.82	+ 14	+ 11	246.84	246.30	+ 10	+ 10
Construction	"	392.02	390.78	+ 9	+ 14	440.07	427.57	+ 9	+ 10	481.87	532.50	— 10	+ 7	478.91	490.33	+ 2	— 2
Retail Sales[2]	%	c	c	— 4	+ x	c	c	— 8	— x	c	c	— 8	— 1	c	c	— 11	— x
Auto Titles[3]:																	
New Cars	No.	4,604	3,898	— 19	— 9	2,785	2,369	— 17	— 7	n.a.	n.a.	n.a.	n.a.	1,180	973	— 30	— 15
New Trucks	"	747	637	— 32	— 24	273	79	— 51	— 58	n.a.	n.a.	n.a.	n.a.	204	157	— 39	— 28
Retail Food Prices[15]	1967	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
Bank Debits[5]	1967[f]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	No.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	Thous. $	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	1967[f]	b	b	b	b	b	b	b	b	148	151	— 8	— 9	87	92	— 5	— 10
Value of Bldg. Const.[9]:																	
Total	"	231	166	+ 67	+ 34	84	495	— 69	+ 37	63	199	— 76	— 36	51	163	— 73	— 13
Residential	"	146	162	+ 43	+ 45	84	30	— 49	— 61	107	184	— 79	— 49	25	20	— 88	— 75
Nonresidential	"	315	170	+ 81	+ 28	84	1,081	— 79	+103	40	207	— 70	— 21	81	331	— 54	+ 88
Steel Production[18]	1967[g]	b	b	b	b	b	b	b	b	b	b	b	b	68	72	— 25	— 22
Labor Force Estimates[14]:																	
Civilian Labor Force	Thous.	423.1	423.9	— 2	— 2	265.7	267.3	— 2	— 1	217.0	217.2	— 3	— 2	127.4	127.8	— 3	— 2
Civilian Employment	"	404.7	405.1	— 1	— 1	248.3	249.2	— 3	— 2	198.2	198.5	— 5	— 4	116.0	116.9	— 4	— 3
Unemp. Total—No.	"	18.4	18.9	— 20	— 18	17.4	18.1	+ 14	+ 17	18.8	18.7	+ 16	+ 15	11.3	10.8	+ 19	+ 9
Unemp., Total—Rate	%	4.3	4.5			6.5	6.8			8.6	8.6			8.9	8.5		

Note: All data are for county areas except bank debits and commercial failures, which are for areas within city limits. The indexes of number employed and payrolls and the employee weekly earnings are based on data for production workers in manufacturing, construction workers in contract construction, and nonsupervisory employees in other categories which exclude agriculture, government, education, and public institutions.

• Indicates series charted (page S-1). For sources and footnotes, see page S-3.

Number Employed, Payrolls, and Man-Hours in Ohio Industry

INDUSTRIAL GROUP	NUMBER EMPLOYED[7]					PAYROLLS[7]					MAN-HOURS[7]				
	INDEX (1967 = 100)		CHANGE			INDEX (1967 = 100)		CHANGE			INDEX (1967 = 100)		CHANGE		
	Mar. 1980 (p)	Feb. 1980 (r)	Mar. 1980 from Feb. 1980	Mar. 1980 from Mar. 1979	3 months 1980 from 1979	Mar. 1980 (p)	Feb. 1980 (r)	Mar. 1980 from Feb. 1980	Mar. 1980 from Mar. 1979	3 months 1980 from 1979	Mar. 1980 (p)	Feb. 1980 (r)	Mar. 1980 from Feb. 1980	Mar. 1980 from Mar. 1979	3 months 1980 from 1979
			%	%	%			%	%	%			%	%	%
Total[w] (2,365)[a]	**85**	**85**	**+ 1**	**— 5**	**— 4**	**195**	**191**	**+ 2**	**— 1**	**— 1**	**82**	**82**	**+ 1**	**— 7**	**— 6**
All Manufacturing[w] (1,286)	**75**	**74**	**+ 1**	**— 10**	**— 9**	**174**	**170**	**+ 2**	**— 8**	**— 9**	**69**	**69**	**+ 1**	**— 13**	**— 13**
Chemicals (68)	79	81	— 3	— 20	— 13	164	164	+ x	— 22	— 18	75	76	— 2	— 22	— 18
Food Products (88)	78	77	+ 2	— 2	— 3	190	185	+ 3	+ 5	+ 4	68	66	+ 2	— 5	— 4
Bakery	69	70	— 1	— 2	+ 1	166	165	+ x	+ 4	+ 9	65	65	— x	— 5	+ x
Miscellaneous	79	77	+ 2	— 1	— 3	193	187	+ 3	+ 5	+ 4	68	66	+ 2	— 4	— 5
Lumber Products (43)	89	87	+ 2	— 12	— 13	187	183	+ 2	— 3	— 3	81	80	+ 2	— 12	— 12
Furniture	100	98	+ 2	— 12	— 13	209	205	+ 2	— 1	— 2	97	94	+ 2	— 11	— 12
Miscellaneous	71	70	+ 1	— 12	— 11	152	148	+ 3	— 9	— 7	59	58	+ 2	— 16	— 14
Machinery (299)	75	75	— 1	— 4	— 2	168	167	+ 1	+ 3	+ 4	71	71	— x	— 6	— 5
Elec. Mach., Apparatus and Supplies	84	83	+ x	— 1	+ x	198	194	+ 2	+ 6	+ 6	80	79	+ 1	— 3	— 2
Machine Tools	65	66	— x	+ 1	— x	154	154	— x	+ 8	+ 9	68	68	— 1	— 1	— 1
Agricultural Equipment	49	49	+ 1	— 11	— 7	114	115	— x	— 4	+ 3	55	55	— 1	— 13	— 8
Special Machinery and Appliances	68	70	— 2	— 8	— 6	141	142	— 1	— 3	— 1	63	64	— 2	— 11	— 9
Metal Products (351)	83	82	+ 1	— 10	— 10	194	191	+ 1	— 8	— 9	74	74	+ x	— 14	— 14
Foundry Products and Drop Forgings	93	91	+ 2	— 14	— 14	234	221	+ 6	— 16	— 17	75	74	+ 1	— 20	— 19
Pipes, Valves, and Plumbers' Supplies	71	77	— 8	— 20	— 12	191	210	— 9	— 15	— 9	80	88	— 8	— 22	— 17
Screw Machine Products and Hdwe.	92	92	+ 1	— 10	— 9	176	170	+ 4	— 14	— 11	88	87	+ 1	— 20	— 16
Sheet Metal Work	83	82	+ 2	— 16	— 18	193	178	+ 9	— 14	— 18	71	67	+ 6	— 19	— 22
Steel Works and Rolling Mills	77	77	— x	— 5	— 5	176	181	— 3	— 1	— 3	70	71	— 2	— 9	— 11
Stoves and Furnaces	89	85	+ 4	— 23	— 22	178	181	— 1	— 18	— 14	90	92	— 1	— 24	— 22
Miscellaneous	80	80	+ 1	— 8	— 9	188	185	+ 1	— 5	— 5	70	70	+ x	— 11	— 11
Paper and Printing (135)	65	64	+ x	— 4	— 4	162	162	— x	+ x	+ 1	59	59	— x	— 8	— 7
Paper and Pulp	49	48	+ x	+ 1	+ x	154	159	— 3	+ 4	+ 7	39	40	— 1	— 4	— 2
Printing and Publishing	75	75	+ 1	— 5	— 5	168	167	+ x	— 2	— 1	67	67	+ x	— 7	— 6
Miscellaneous	65	65	— x	— 6	— 6	157	155	+ 1	— x	+ x	65	65	+ x	— 10	— 9
Rubber Products (53)	63	64	— 1	— 14	— 13	154	154	— x	— 14	— 12	57	58	— 1	— 20	— 18
Tires and Tubes	47	48	— 2	— 10	— 7	101	102	— 1	— 12	— 10	35	35	— 2	— 17	— 14
Miscellaneous	73	73	— 1	— 16	— 15	196	196	+ x	— 15	— 13	76	77	— 1	— 21	— 19
Stone, Clay, and Glass Products (93)	74	73	+ x	— 2	— 4	184	180	+ 2	+ 2	+ 1	80	79	+ 1	— 4	— 6
Brick and Tile	53	50	+ 6	— 11	— 11	113	104	+ 9	— 3	— 5	54	50	+ 8	— 11	— 13
Glass	79	79	+ x	+ x	— 5	183	179	+ 2	+ 3	— x	79	78	+ 1	— 2	— 5
Vitreous & Semi-vit. China & Pottery	57	57	+ x	— 1	— 1	172	171	+ x	+ 8	+ 9	88	87	+ 1	— 3	— 2
Miscellaneous	83	84	— 1	— 4	— 3	213	212	+ 1	— 2	+ 1	86	86	— 1	— 9	— 7
Textiles (37)	72	72	+ x	— 6	— 7	114	111	+ 3	— 3	— 6	72	70	+ 2	— 9	— 11
Men's Clothing	81	81	+ 1	— 4	— 4	114	108	+ 5	— 2	— 6	74	70	+ 6	— 9	— 12
Miscellaneous	67	68	— x	— 7	— 9	119	118	+ x	— 4	— 6	71	72	— 1	— 9	— 10
Vehicles (62)	70	66	+ 7	— 26	— 28	173	155	+ 12	— 30	— 34	62	57	+ 9	— 32	— 36
Autos and Parts	76	69	+ 10	— 31	— 35	193	166	+ 16	— 35	— 41	66	59	+ 13	— 38	— 42
Cars, Electric and Steam Railway	95	110	— 14	— 14	— 2	206	237	— 13	— 8	+ 1	82	97	— 15	— 16	— 4
Miscellaneous	61	61	+ x	+ 21	+ 24	140	141	— 1	+ 33	+ 35	61	62	— 2	+ 18	+ 21
Miscellaneous Manufacturing (57)	63	64	— 1	— 7	— 7	146	149	— 2	+ 4	+ 6	60	61	— 2	— 7	— 5
Total Trade, Service, and Utilities[w] (705)	**101**	**100**	**+ 1**	**— 1**	**— x**	**234**	**229**	**+ 2**	**+ 7**	**+ 7**	**103**	**102**	**+ 2**	**— 1**	**+ x**
Service (208)	119	119	— x	+ 3	+ 4	253	251	+ 1	+ 11	+ 12	132	132	+ x	+ 4	+ 4
Trade, Retail and Wholesale (388)	89	87	+ 2	— 3	— 3	200	192	+ 4	+ 3	+ 3	86	84	+ 3	— 4	— 3
Transportation & Public Utilities (109)	109	108	+ x	— x	— x	298	296	+ 1	+ 8	+ 8	108	107	+ 1	— x	— 1
Construction (346)	**59**	**59**	**+ x**	**— 5**	**+ 4**	**153**	**157**	**— 3**	**+ 5**	**+ 21**	**54**	**55**	**— 1**	**— 2**	**+ 12**
Mines and Quarries (28)	**126**	**122**	**+ 3**	**+ 1**	**— 1**	**282**	**276**	**+ 2**	**+ 10**	**+ 9**	**79**	**77**	**+ 3**	**+ 1**	**— 1**

Indexes of number employed and of payrolls are based on the employment of 496,903 persons (production workers in manufacturing and mining, construction workers in contract construction, and nonsupervisory employees in other categories) in 2,365 firms; indexes of man-hours, on the employment of 482,923 production workers and nonsupervisory employees in 2,265 firms. Figures in parentheses show number of firms reporting employment and payrolls. In some cases fewer firms report man-hours. Data do not include agriculture, government, education, or public institutions. For sources and footnotes, see below.

FOOTNOTES FOR BULLETIN TABLES AND CHARTS

†Change in number of failures: [a]Figures in parentheses show number of firms reporting this month; [n.a.]Current data not available; [b]Comparable data not available; [c]Only percentage of change available; [d]Adjusted for seasonal change; [f]Adjusted for number of working days; [g]Four weeks average; [h]Annual rate; [p]Preliminary; [r]Revised; [s]Series revised; [w]Weighted; [x]Less than 0.5 percent; [y]More than 1,000 percent increase.

Primary Sources:

Computed from: [1]Center for Business and Economic Research multiple regression model.

Computed from original data collected by the Center for Business and Economic Research from: [2]Ohio retailers; [3]County Clerks of Courts; [4]Local Power and Light Companies.

Computed by the Center for Business and Economic Research from data supplied by: [5]Board of Governors of the Federal Reserve System; [6]Life Insurance Marketing and Research Association; [7]Division of Research and Statistics of the Ohio Bureau of Employment Services, collected in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor; [8]Federal Power Commission; [9]F. W. Dodge Division, McGraw-Hill Information Systems Company; [10]Dun & Bradstreet, Inc.

Other data sources: [11]Federal Reserve Board; [12]Dun & Bradstreet, Inc.; [13]U.S. Department of Commerce; [14]Division of Research and Statistics of the Ohio Bureau of Employment Services; [15]U.S. Department of Labor; [16]Department of Agricultural Economics, O.S.U.; [17]U.S. Department of Agriculture; [18]American Iron and Steel Institute; [19]U.S. Department of Energy; [20]National Machine Tool Builders' Association; [21]F. W. Dodge Division, McGraw-Hill Information Systems Company; [22]R. L. Polk & Co.; [23]Standard & Poor's Corporation.

Note: In the Ohio-U.S. table, page S-2, dual source notes on a single line of the table stub refer first to Ohio data, second to U.S. data.

Ohio Retail Sales Trends

Sales of Ohio Retailers in March rose 12 percent above February sales, but were down 4 percent from sales in year-ago March. After adjustment for seasonal variation, the current March-from-February relationship showed a 3 percent decline.

For the First Quarter of 1980, total retail sales were 3 percent higher than sales in the first quarter of 1979.

By Kind of Business, the upward sales movement in March from February among 17 of the 23 categories shown individually was led by family clothing stores (+57 percent), shoe stores (+45 percent), and department stores (+44 percent). The largest declines in the 11 categories experiencing lower sales this March than in March 1979 were, as might be expected, by motor vehicle dealers (—28 percent) and lumber-building materials dealers (—20 percent). Through the first quarter of 1980, all but 5 kinds of business maintained higher sales levels than first-quarter sales in 1979. Again, the greatest decline in the current period was in sales by motor vehicle dealers—down 13 percent.

INDEXES OF OHIO RETAIL SALES

KIND OF BUSINESS	UNADJUSTED INDEX (1957–59 = 100)		CHANGE			
			Mar. 1980 from Feb. 1980		Mar. 1980 from Mar. 1979	3 months 1980 from 1979
	Mar. 1980 (p)	Feb. 1980 (r)	Not Seas. Adj.	Seas. Adj.		
				%	%	%
Total Retail Stores[3], ▼	**282**	**252**	**+12**	**— 3**	**— 4**	**+ 3**
Grocery Stores	329	310	+ 6	— 2	+ 7	+11
Other Food Stores	337	369	— 9	—15	— 7	+12
General Stores (With Food)	171	174	— 2	—15	+33	+38
Department Stores	258	179	+44	+12	+ 6	+ 3
Other General Merchandise	240	231	+ 4	—14	+10	+19
Men's Clothing–Furns. Strs.	93	99	— 6	—12	— 3	+ 1
Family Clothing Stores	152	97	+57	+ 5	+18	+ 5
Women's Ready-to-Wear Strs.	124	102	+22	— 8	— 3	— 2
Shoe Stores	110	76	+45	— 1	— 6	+ 1
Furniture Stores	248	215	+15	+ 4	— 7	+ 5
Household Appl.–TV-Rdio Strs.	193	173	+12	+14	+10	+ 4
Home Furnishings Stores	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Motor Vehicle Dealers	306	296	+ 4	—13	—28	—13
Other Automotive	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Filling Stations	456	331	+37	+21	+15	+ 8
Lumber–Bldg. Matls. Dealers	188	183	+ 3	—19	—20	+ x
Paint, Glass & Wallpaper Strs.	162	153	+ 6	—23	+ x	+20
Heat.–Plumb. & Elec. Sup. Strs.	220	238	— 7	— 9	+30	+29
Hardware Stores	203	181	+12	— 7	— 1	— 1
Farm Equipment Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Eating & Drinking Places	217	190	+14	+ 4	— 1	+ 4
Drug Stores	264	309	—15	—18	— x	+10
Jewelry Stores	153	152	+ 1	— 3	+ 9	+16
Florists	151	205	—26	—50	+ 1	— 2
Fuel Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hay–Feed, Farm & Grdn. Strs.	518	370	+40	+ 9	+ 3	— 3
State Liquor Stores	157	149	+ 5	— 5	— 1	+ 3

For sources and footnotes, see page S-3.

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By MARTHA N. STRATTON

Personal Income Estimates for Ohio and Ohio Counties —U.S. Bureau of Economic Analysis

Preliminary estimates of 1979 state and national total personal income and per capita income, recently completed by the Bureau of Economic Analysis in the U.S. Department of Commerce, show Ohio total income as $94 billion and per capita income as $8,775 and the corresponding United States total income as $1,916 billion and per capita income as $8,706. Ohio's per capita income ended the decade of the 1970s essentially in the relative position vs. the nation that prevailed throughout the period. In 1979 Ohio's per capita income represented 101 percent of the national average. From 1970 through 1978 Ohio per capita income had ranged from slightly above 100 percent to 101 percent of the U.S. average in all years but 1975, when the Ohio figure dropped to 98 percent of the U.S. average.

In current dollars, Ohio per capita income more than doubled in the 1970s, as 1979 income was 122 percent above the 1970 per capita income of $3,949. Over the same time span, the increase in the U.S. Consumer Price Index—the most commonly used, though less than perfect, measure of inflation—was 87 percent. Factoring the CPI increase out of the per capita income change leaves the average Ohioan with real income 19 percent higher at the end of the period than in the initial year of the period. Considering that the Consumer Price Index is thought to overstate inflation and that the period ended with an 11 percent jump in the CPI in 1979 from 1978, real income growth was good through the 1970s for individuals both in Ohio and in the U.S. (where a 1979-from-1970 increase of 124 percent in current-dollar income similarly factored down to a 20 percent increase).

Looking at the relationship of Ohio and the U.S. in terms of total personal income, however, points up a slightly declining trend in the state's position through the 1970s. As a percent of U.S. total personal income, Ohio total income declined gradually from 5.3 percent in 1970 to 4.9 percent in 1978—and again showed 4.9 percent in 1979. Ohio kept pace with the U.S. on a per capita income basis because Ohio's share of U.S. population also declined during the 1970s, from 5.2 percent in 1970 to 4.9 percent in 1979.

Regional Estimates of Personal Income

At about the same time that U.S. and state total income estimates for 1979 became available, the Regional Economic Measurement Division of the Bureau of Economic Analysis released for the first time its 1978 tabulations of *detailed* personal income data, by major sources, at the county level. Data for 17 Standard Metropolitan Statistical Areas (SMSAs) totally or partially in Ohio and for Ohio's 88 counties were supplied to the Center for Business and Economic Research, as one of the BEA User Group Members. In the same packet, revisions of detailed county and SMSA data for 1973 through 1977 and comparable state of Ohio data for 1973 through 1978 were released by the BEA—along with annual summary figures for total personal income, per capita personal income, and population on a consistent basis for the years 1959, 1962, and 1965 through 1978 in all of these areas.

While the preliminary 1979 figures offer an early evaluation of the more current period on a statewide basis, 1973-1978 data for total personal income, per capita personal income, and population in individual Ohio counties and in SMSAs which contain Ohio counties are presented in Tables 1-6 (pages 2-6) to provide county and area comparisons. Figures have been adjusted by BEA to reflect income at the place of residence.

(Continued on page 2)

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TABLE 1—TOTAL PERSONAL INCOME, BY COUNTY, OHIO, 1973-1978

County	Total Personal Income *(Million Dollars)*						Percent of Ohio Total	Percent Increase
	1973	1974	1975	1976	1977	1978	1978	1978 from 1973
Adams	57.7	67.8	72.0	78.8	90.1	101.2	0.12	75
Allen	535.5	587.5	615.0	678.7	767.0	868.4	1.03	62
Ashland	199.8	221.8	234.9	260.1	286.6	326.3	0.39	63
Ashtabula	439.1	486.3	512.3	567.0	626.5	703.6	0.83	60
Athens	179.7	197.5	212.7	236.5	265.8	291.5	0.35	62
Auglaize	191.0	206.0	222.1	241.0	271.7	301.5	0.36	58
Belmont	360.6	396.0	440.3	496.7	548.8	604.4	0.72	68
Brown	98.4	113.9	122.8	135.0	152.6	169.6	0.20	72
Butler	1,082.9	1,198.3	1,304.3	1,476.4	1,655.1	1,811.0	2.14	67
Carroll	83.4	95.0	102.3	115.0	126.8	143.7	0.17	72
Champaign	144.4	159.9	174.1	190.5	207.4	226.0	0.27	56
Clark	729.9	781.2	826.7	904.2	995.3	1,105.2	1.31	51
Clermont	437.2	492.9	540.6	623.3	719.7	826.0	0.98	89
Clinton	176.5	193.8	208.7	232.0	261.0	286.6	0.34	62
Columbiana	455.9	511.4	543.1	602.5	669.0	751.2	0.89	65
Coshocton	161.7	175.3	186.8	211.2	234.0	262.8	1.31	63
Crawford	241.8	265.3	280.5	309.3	342.1	377.1	0.45	56
Cuyahoga	9,764.6	10,612.8	11,104.3	12,109.1	13,231.8	14,654.4	17.35	50
Darke	234.9	255.5	277.9	303.2	332.4	367.2	0.43	56
Defiance	197.4	204.9	216.2	256.4	278.9	320.2	0.38	62
Delaware	222.4	244.7	257.9	293.3	340.1	383.3	0.45	72
Erie	413.3	437.3	463.9	510.4	568.2	635.5	0.75	54
Fairfield	361.3	411.3	452.7	515.0	580.6	659.8	0.78	83
Fayette	103.4	120.2	129.2	143.8	162.2	176.5	0.21	71
Franklin	4,309.1	4,664.5	4,967.1	5,467.6	6,093.5	6,735.9	7.98	56
Fulton	182.4	192.1	206.7	229.3	251.7	283.2	0.34	55
Gallia	111.9	122.1	124.6	138.6	161.6	185.1	0.22	65
Geauga	339.9	376.0	406.2	458.8	518.6	586.7	0.69	73
Greene	609.3	648.9	705.8	785.2	866.2	954.3	1.13	57
Guernsey	159.1	176.9	186.3	206.5	229.4	255.7	0.30	61
Hamilton	4,875.8	5,305.5	5,681.7	6,178.2	6,753.2	7,588.8	8.99	56
Hancock	318.8	345.0	358.5	406.4	451.6	505.4	0.60	59
Hardin	135.2	150.2	157.6	171.9	193.6	212.0	0.25	57
Harrison	75.1	81.3	98.3	109.7	117.0	122.4	0.14	63
Henry	145.4	160.4	171.0	195.2	207.6	228.4	0.27	57
Highland	115.2	128.0	136.6	151.2	175.8	195.5	0.23	70
Hocking	78.4	86.8	94.0	106.5	118.1	132.8	0.16	69
Holmes	81.6	87.6	98.4	108.1	120.9	138.3	0.16	70
Huron	238.3	260.8	277.9	313.5	352.3	391.5	0.46	64
Jackson	92.2	105.1	112.4	124.2	139.4	156.4	0.19	70
Jefferson	426.3	489.0	533.0	596.2	654.4	706.0	0.84	66
Knox	173.0	189.1	198.8	224.5	247.4	283.2	0.34	64
Lake	1,048.1	1,171.5	1,246.9	1,390.7	1,544.1	1,724.6	2.04	65
Lawrence	218.1	244.9	263.3	296.4	327.6	369.0	0.44	69
Licking	488.2	539.8	577.2	652.0	729.2	824.0	0.98	69
Logan	168.3	189.9	201.8	228.9	257.0	285.5	0.34	70
Lorain	1,293.2	1,418.1	1,505.6	1,678.8	1,922.9	2,132.1	2.52	65
Lucas	2,565.3	2,744.4	2,914.4	3,232.7	3,536.0	3,891.6	4.61	52
Madison	125.9	146.0	157.6	170.4	192.1	211.1	0.25	68
Mahoning	1,445.6	1,597.5	1,671.9	1,843.2	2,044.9	2,227.3	2.64	54
Marion	308.5	341.1	364.6	416.3	466.6	509.9	0.60	65
Medina	454.2	515.7	568.8	646.4	760.4	880.5	1.04	94
Meigs	80.5	92.0	96.0	108.2	118.2	132.7	0.16	65
Mercer	172.4	186.6	192.2	216.0	238.7	281.7	0.33	63
Miami	464.0	504.7	531.3	593.0	672.4	741.8	0.88	60
Monroe	50.0	58.3	58.3	70.4	83.6	95.8	0.11	92
Montgomery	3,123.5	3,295.3	3,524.5	3,930.2	4,311.5	4,732.6	5.60	52
Morgan	51.6	55.8	60.9	67.2	76.5	83.1	0.10	61
Morrow	92.1	99.5	98.9	115.5	132.6	146.3	0.17	59
Muskingum	330.4	361.5	390.5	437.8	484.6	544.0	0.64	65
Noble	35.0	39.4	41.2	45.6	51.2	58.0	0.07	66
Ottawa	199.5	213.9	229.0	252.1	277.7	306.6	0.36	54
Paulding	97.9	103.3	109.4	124.6	136.6	151.7	0.18	55
Perry	99.8	108.1	118.6	132.2	146.8	163.8	0.19	64
Pickaway	174.1	196.3	209.4	228.0	261.9	288.1	0.34	66
Pike	63.0	68.8	74.8	85.0	97.6	112.0	0.13	78
Portage	533.7	589.6	635.5	705.7	783.0	880.1	1.04	65
Preble	157.9	167.1	172.1	190.9	210.1	232.3	0.28	47
Putnam	139.7	154.2	165.4	186.3	202.0	227.4	0.27	63
Richland	652.1	680.0	701.8	781.2	887.7	968.3	1.15	48
Ross	241.2	273.7	289.8	324.1	369.9	414.7	0.49	72
Sandusky	292.0	317.3	338.5	374.7	418.3	464.2	0.55	59
Scioto	284.2	308.2	327.9	369.1	410.0	455.5	0.54	60
Seneca	302.0	329.5	336.7	378.2	420.2	463.2	0.55	53
Shelby	185.5	203.7	210.0	237.0	265.9	299.0	0.35	61
Stark	1,827.0	2,013.4	2,132.3	2,332.8	2,585.6	2,896.3	3.43	59
Summit	2,801.8	3,019.5	3,170.5	3,429.1	3,820.2	4,215.5	4.99	50
Trumbull	1,299.5	1,383.7	1,432.6	1,616.3	1,782.4	2,011.7	2.38	55
Tuscarawas	342.4	379.9	403.9	445.3	497.7	558.4	0.66	63
Union	116.6	131.6	144.5	162.3	183.8	204.2	0.24	75
Van Wert	157.3	169.0	177.0	200.2	220.6	246.7	0.29	57
Vinton	29.0	32.7	33.7	38.1	43.7	52.1	0.06	80
Warren	374.3	404.3	435.7	506.3	577.3	652.8	0.77	74
Washington	228.5	268.0	284.4	324.5	361.9	406.6	0.48	78
Wayne	414.0	448.5	479.6	536.8	594.9	679.1	0.80	64
Williams	174.2	183.9	194.1	221.3	248.9	277.6	0.33	59
Wood	464.4	507.3	547.2	620.6	696.4	777.1	0.92	67
Wyandot	107.8	116.9	117.8	136.4	151.1	164.4	0.19	52
OHIO, TOTAL	53,614.0	58,380.5	61,954.6	68,539.0	75,968.1	84,455.6	100.00	58

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Measurement Division.

TABLE 2—PER CAPITA PERSONAL INCOME, BY COUNTY, OHIO, 1973-1978

County	Per Capita Personal Income *(Dollars)*						Percent of Ohio Avg. 1978	Percent Increase 1978 from 1973
	1973	1974	1975	1976	1977	1978		
Adams	2,680	3,058	3,304	3,490	3,948	4,274	54	59
Allen	4,897	5,364	5,624	6,290	7,089	8,015	102	64
Ashland	4,541	5,046	5,274	5,910	6,488	7,218	92	59
Ashtabula	4,409	4,855	5,087	5,703	6,294	6,974	89	58
Athens	3,220	3,711	4,144	4,703	5,065	5,314	68	65
Auglaize	4,755	5,049	5,241	5,859	6,588	7,244	92	52
Belmont	4,378	4,830	5,339	6,016	6,711	7,397	94	69
Brown	3,383	3,878	4,099	4,492	5,041	5,455	69	61
Butler	4,535	4,956	5,327	6,008	6,617	7,064	90	56
Carroll	3,552	3,918	4,163	4,608	4,979	5,516	70	55
Champaign	4,559	5,005	5,471	5,915	6,396	6,939	88	52
Clark	4,629	5,010	5,346	5,972	6,620	7,338	93	59
Clermont	4,276	4,722	4,955	5,618	6,293	6,876	88	61
Clinton	5,521	5,986	6,415	7,128	7,947	8,691	111	57
Columbiana	4,107	4,597	4,865	5,389	5,939	6,576	84	60
Coshocton	4,633	5,051	5,315	6,102	6,800	7,581	96	64
Crawford	4,711	5,224	5,570	6,164	6,891	7,630	97	62
Cuyahoga	5,929	6,547	6,947	7,671	8,485	9,503	121	60
Darke	4,528	4,792	5,190	5,595	6,166	6,849	87	51
Defiance	5,368	5,539	5,819	6,903	7,459	8,435	107	57
Delaware	4,645	4,887	5,162	5,815	6,597	7,217	92	55
Erie	5,335	5,654	5,988	6,635	7,387	8,315	106	56
Fairfield	4,555	5,011	5,367	6,008	6,706	7,427	95	63
Fayette	3,935	4,583	4,950	5,478	6,175	6,765	86	72
Franklin	5,035	5,423	5,760	6,345	7,043	7,737	98	54
Fulton	5,210	5,396	5,826	6,395	6,926	7,798	99	50
Gallia	4,176	4,476	4,317	4,834	5,379	6,195	79	48
Geauga	5,163	5,663	5,965	6,735	7,329	8,048	102	56
Greene	4,784	5,149	5,608	6,141	6,748	7,400	94	55
Guernsey	4,055	4,451	4,694	5,262	5,889	6,545	83	61
Hamilton	5,337	5,857	6,381	6,943	7,614	8,572	109	61
Hancock	5,104	5,494	5,740	6,552	7,293	8,097	103	59
Hardin	4,184	4,723	4,970	5,377	6,090	6,498	83	55
Harrison	4,231	4,552	5,546	6,247	6,749	6,952	88	64
Henry	5,124	5,687	6,086	6,996	7,425	7,776	99	52
Highland	3,807	4,157	4,482	4,771	5,498	6,211	79	63
Hocking	3,727	4,010	4,339	4,831	5,317	5,993	76	61
Holmes	3,333	3,511	3,894	4,274	4,720	5,319	68	60
Huron	4,623	5,042	5,268	6,008	6,719	7,327	93	58
Jackson	3,234	3,671	3,857	4,184	4,707	5,233	67	62
Jefferson	4,441	5,162	5,603	6,347	7,008	7,587	97	71
Knox	4,039	4,368	4,565	5,197	5,611	6,258	80	55
Lake	5,197	5,754	5,959	6,644	7,370	8,136	104	57
Lawrence	3,641	4,073	4,456	4,841	5,306	5,925	75	63
Licking	4,420	4,831	5,026	5,717	6,341	7,019	89	59
Logan	4,607	5,187	5,397	6,144	6,899	7,613	97	65
Lorain	4,897	5,311	5,641	6,391	7,175	7,861	100	61
Lucas	5,294	5,689	6,068	6,857	7,572	8,384	107	58
Madison	4,282	4,745	4,877	5,326	6,033	6,550	83	53
Mahoning	4,733	5,168	5,716	6,129	6,802	7,425	95	57
Marion	4,660	5,068	5,388	6,219	7,021	7,665	98	64
Medina	4,980	5,445	5,740	6,355	7,154	7,870	100	58
Meigs	3,853	4,346	4,500	5,004	5,423	5,976	76	55
Mercer	4,624	4,978	5,083	5,767	6,305	7,275	93	57
Miami	5,314	5,788	6,067	6,790	7,677	8,419	107	58
Monroe	3,155	3,697	3,711	4,479	5,225	5,834	74	85
Montgomery	5,234	5,575	5,970	6,725	7,449	8,160	104	56
Morgan	3,851	4,196	4,545	4,999	5,741	6,182	79	61
Morrow	3,907	4,138	4,041	4,805	5,449	5,837	74	49
Muskingum	4,114	4,536	4,821	5,416	5,936	6,643	85	61
Noble	3,251	3,646	3,683	4,066	4,550	5,223	66	61
Ottawa	5,115	5,571	5,848	6,643	7,175	7,947	101	55
Paulding	4,888	5,106	5,324	6,155	6,712	7,427	95	52
Perry	3,369	3,817	4,000	4,586	5,057	5,443	69	62
Pickaway	4,056	4,525	4,747	5,228	5,988	6,523	83	61
Pike	3,137	3,424	3,620	4,090	4,659	5,111	65	63
Portage	4,083	4,461	4,812	5,322	5,924	6,605	84	62
Preble	4,425	4,709	4,770	5,250	5,733	6,260	80	41
Putnam	4,368	4,865	5,141	5,763	6,332	7,287	93	67
Richland	4,986	5,214	5,363	5,970	6,821	7,432	95	49
Ross	3,930	4,495	4,704	5,295	5,939	6,580	84	67
Sandusky	4,639	5,103	5,381	6,029	6,722	7,435	95	60
Scioto	3,592	3,898	4,100	4,433	4,968	5,501	70	53
Seneca	4,923	5,388	5,557	6,319	7,025	7,713	98	57
Shelby	4,711	5,074	5,175	5,912	6,572	7,234	92	54
Stark	4,859	5,253	5,627	6,203	6,871	7,669	98	58
Summit	5,147	5,615	5,875	6,438	7,251	8,049	102	56
Trumbull	5,481	5,749	5,868	6,743	7,378	8,185	104	49
Tuscarawas	4,321	4,778	5,038	5,538	6,193	6,967	89	61
Union	4,586	4,761	5,366	5,925	6,150	6,815	87	49
Van Wert	5,218	5,703	5,986	6,815	7,342	8,099	103	55
Vinton	2,822	3,183	3,251	3,686	4,092	4,759	61	69
Warren	4,276	4,641	5,021	5,697	6,366	7,025	89	64
Washington	3,889	4,537	4,728	5,443	6,030	6,622	84	70
Wayne	4,568	4,932	5,076	5,738	6,357	7,053	90	54
Williams	5,020	5,259	5,578	6,373	7,144	7,917	101	58
Wood	4,764	5,010	5,443	6,124	6,802	7,404	94	55
Wyandot	4,795	5,168	5,195	6,099	6,860	7,541	96	57
OHIO, AVERAGE	4,990	5,433	5,771	6,411	7,102	7,857	100	57

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Measurement Division.

TABLE 3—POPULATION, BY COUNTY, OHIO, 1973-1978

County	Population (*Thousands*)						Percent of Ohio Total 1978	Percent Change 1978 from 1973
	1973	1974	1975	1976	1977	1978		
Adams	21.5	22.2	21.8	22.6	22.8	23.7	0.22	10.2
Allen	109.3	109.5	109.3	107.9	108.2	108.3	1.01	— 0.9
Ashland	44.0	44.0	44.5	44.0	44.2	45.2	0.42	2.7
Ashtabula	99.6	100.2	100.7	99.4	99.5	100.9	0.94	1.3
Athens	55.8	53.2	51.3	50.3	52.5	54.9	0.51	— 1.6
Auglaize	40.2	40.8	42.4	41.1	41.2	41.6	0.39	3.5
Belmont	82.4	82.0	82.5	82.6	81.8	81.7	0.76	— 0.8
Brown	29.1	29.4	30.0	29.8	30.3	31.1	0.29	6.9
Butler	238.8	241.8	244.8	245.7	250.1	256.4	2.39	7.4
Carroll	23.5	24.2	24.6	25.0	25.5	26.1	0.24	11.1
Champaign	31.7	32.0	31.8	32.2	32.4	32.6	0.30	2.8
Clark	157.7	155.9	154.6	151.4	150.4	150.6	1.40	— 4.5
Clermont	102.2	104.4	109.1	110.9	114.4	120.1	1.12	17.5
Clinton	32.0	32.4	32.5	32.5	32.8	33.0	0.31	3.1
Columbiana	111.0	111.3	111.6	111.8	112.6	114.2	1.06	2.9
Coshocton	34.9	34.7	35.2	34.6	34.4	34.7	0.32	— 0.6
Crawford	51.3	50.8	50.4	50.2	49.6	49.4	0.46	— 3.7
Cuyahoga	1,646.9	1,620.9	1,598.4	1,578.6	1,559.5	1,542.1	14.35	— 6.4
Darke	51.9	53.3	53.6	54.2	53.9	53.6	0.50	3.3
Defiance	36.8	37.0	37.1	37.1	37.4	38.0	0.35	3.3
Delaware	47.9	50.1	50.0	50.4	51.5	53.1	0.49	10.9
Erie	77.5	77.3	77.5	76.9	76.9	76.4	0.71	— 1.4
Fairfield	79.3	82.1	84.4	85.7	86.6	88.8	0.83	12.0
Fayette	26.3	26.2	26.1	26.2	26.3	26.1	0.24	— 0.8
Franklin	855.9	860.2	862.3	861.7	865.1	870.6	8.10	1.7
Fulton	35.0	35.6	35.5	35.8	36.3	36.3	0.34	3.7
Gallia	26.8	27.3	28.9	28.7	30.0	29.9	0.28	11.6
Geauga	65.8	66.4	68.1	68.1	70.8	72.9	0.68	10.8
Greene	127.3	126.0	125.9	127.9	128.4	129.0	1.20	1.3
Guernsey	39.2	39.8	39.7	39.3	39.0	39.1	0.36	— 0.3
Hamilton	913.6	905.9	890.5	889.9	886.9	885.3	8.24	— 3.1
Hancock	62.5	62.8	62.5	62.0	61.9	62.4	0.58	— 0.2
Hardin	32.3	31.8	31.7	32.0	31.8	32.6	0.30	0.9
Harrison	17.8	17.9	17.7	17.6	17.3	17.6	0.16	— 1.1
Henry	28.4	28.2	28.1	27.9	28.0	29.4	0.27	3.5
Highland	30.3	30.8	30.5	31.7	32.0	31.5	0.29	4.0
Hocking	21.0	21.7	21.7	22.0	22.2	22.2	0.21	5.7
Holmes	24.5	25.0	25.3	25.3	25.6	26.0	0.24	6.1
Huron	51.5	51.7	52.8	52.2	52.4	53.4	0.50	3.7
Jackson	28.5	28.6	29.1	29.7	29.6	29.9	0.28	4.9
Jefferson	96.0	94.7	95.1	93.9	93.4	93.1	0.87	— 3.0
Knox	42.8	43.3	43.5	43.2	44.1	45.3	0.42	5.8
Lake	201.7	203.6	209.2	209.3	209.5	212.0	1.97	5.1
Lawrence	59.9	60.1	59.1	61.2	61.8	62.3	0.58	4.0
Licking	110.4	111.7	114.8	114.1	115.0	117.4	1.09	6.3
Logan	36.5	36.6	37.4	37.3	37.3	37.5	0.35	2.7
Lorain	264.1	267.0	266.9	262.7	268.0	271.2	2.52	2.7
Lucas	484.5	482.4	480.3	471.5	467.0	464.2	4.32	— 4.2
Madison	29.4	30.8	32.3	32.0	31.8	32.2	0.30	9.5
Mahoning	305.4	309.1	292.5	300.7	300.6	300.0	2.79	— 1.8
Marion	66.2	67.3	67.7	66.9	66.5	66.5	0.62	0.5
Medina	91.2	94.7	99.1	101.7	106.3	111.9	1.04	22.7
Meigs	20.9	21.2	21.3	21.6	21.8	22.2	0.21	6.2
Mercer	37.3	37.5	37.8	37.4	37.9	38.7	0.36	3.8
Miami	87.3	87.2	87.6	87.3	87.6	88.1	0.82	0.9
Monroe	15.9	15.8	15.7	15.7	16.0	16.4	0.15	3.1
Montgomery	596.8	591.1	590.4	584.4	578.8	580.0	5.40	— 2.8
Morgan	13.4	13.3	13.4	13.4	13.3	13.5	0.13	0.7
Morrow	23.6	24.1	24.5	24.0	24.3	25.1	0.23	6.4
Muskingum	80.3	79.7	81.0	80.8	81.6	81.9	0.76	2.0
Noble	10.8	10.8	11.2	11.2	11.2	11.1	0.10	2.8
Ottawa	39.0	38.4	39.2	38.0	38.7	38.6	0.36	— 1.0
Paulding	20.0	20.2	20.5	20.2	20.4	20.4	0.19	2.0
Perry	29.6	28.3	29.7	28.8	29.0	30.1	0.28	1.7
Pickaway	42.9	43.4	44.1	43.6	43.7	44.2	0.41	3.0
Pike	20.1	20.1	20.7	20.8	20.9	21.9	0.20	9.0
Portage	130.7	132.1	132.1	132.6	132.2	133.3	1.24	2.0
Preble	35.7	35.5	36.1	36.4	36.6	37.1	0.35	3.9
Putnam	32.0	31.7	32.2	32.3	31.9	31.2	0.29	— 2.5
Richland	130.8	130.4	130.9	130.8	130.1	130.3	1.21	— 0.4
Ross	61.4	60.9	61.6	61.2	62.3	63.0	0.59	2.6
Sandusky	63.0	62.2	62.9	62.1	62.2	62.4	0.58	— 1.0
Scioto	79.1	79.1	80.0	83.3	82.5	82.8	0.77	4.7
Seneca	61.4	61.2	60.6	59.9	59.8	60.1	0.56	— 2.1
Shelby	39.4	40.2	40.6	40.1	40.5	41.3	0.38	4.8
Stark	376.0	383.3	379.0	376.1	376.3	377.7	3.51	0.5
Summit	544.3	537.7	539.7	532.6	526.9	523.7	4.87	— 3.8
Trumbull	237.1	240.7	244.1	239.7	241.6	245.8	2.29	3.7
Tuscarawas	79.2	79.5	80.2	80.4	80.4	80.1	0.75	1.1
Union	25.4	27.6	26.9	27.4	29.9	30.0	0.28	18.1
Van Wert	30.1	29.6	29.6	29.4	30.1	30.5	0.28	1.3
Vinton	10.3	10.3	10.4	10.3	10.7	10.9	0.10	5.8
Warren	87.5	87.1	86.8	88.9	90.7	92.9	0.86	6.2
Washington	58.8	59.1	60.2	59.6	60.0	61.4	0.57	4.4
Wayne	90.6	90.9	94.5	93.6	93.6	96.3	0.90	6.3
Williams	34.7	35.0	34.8	34.7	34.8	35.1	0.33	1.2
Wood	97.5	101.3	100.5	101.3	102.4	105.0	0.98	7.7
Wyandot	22.5	22.6	22.7	22.4	22.0	21.8	0.20	— 3.1
OHIO, TOTAL	10,745.3	10,745.4	10,735.3	10,690.0	10,696.2	10,748.7	100.00	a

[a] Less than 0.05 percent change.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Measurement Division.

BULLETIN OF BUSINESS RESEARCH

STATISTICAL SUMMARY

Center for Business and Economic Research
The Ohio State University

Volume LV, Number 6 • June 1980

Business Conditions in Ohio and the United States

ITEM	OHIO						UNITED STATES					
				CHANGE FROM						CHANGE FROM		
		Apr. 1980	Mar. 1980	Last Month	Last Year			Apr. 1980	Mar. 1980	Last Month	Last Year	
	Unit or Index Base Period	(p)	(r)	Apr. 1980 from Mar. 1980	Apr. 1980 from Apr. 1979	4 months 1980 from 1979	Unit or Index Base Period	(p)	(r)	Apr. 1980 from Mar. 1980	Apr. 1980 from Apr. 1979	4 months 1980 from 1979
GENERAL BUSINESS				%	%	%				%	%	%
• Bank Debits[5, 11]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	*Bil. $ Ex.NY[d, h]*	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Number[12]	*Number*	n.a.	n.a.	n.a.	n.a.	n.a.	*Number*	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures Liabilities[12]	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	n.a.	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	n.a.
Life Insurance Sales[6]	*1967*	371	359	+ 3	+ 16	+ 12	*1967*	394	379	+ 4	+ 19	+ 16
INCOME												
• Total Personal Income[1, 13]	*Mil. Dol.[d, h]*	99,277	99,592	— x	+ 9	+ 9	*Bil. Dol.[d, h]*	2,070	2,070	+ x	+ 10	+ 11
Salaries & Wages Income[7, 13]	*Mil. Dol.[d, h]*	c	c	— 2	+ 2	— x	*Bil. Dol.[d, h]*	1,306	1,313	— 1	+ 8	+ 9
Nonagricultural Income[13]		b	b	b	b	b	*Bil. Dol.[d, h]*	2,028	2,026	+ x	+ 11	+ 11
Employee Earn.—Gross Wkly.: Mfg.[14, 15]	*Dollars*	336.94	339.05	— 1	+ 11	+ 5	*Dollars*	278.56	280.99	— 1	+ 9	+ 7
" " Const.[14, 15]	*Dollars*	435.71	441.86	— 1	+ 12	+ 10	*Dollars*	351.36	348.00	+ 1	+ 10	+ 7
Agr. Income (Cash Mktgs.)[16, 17]	*1957–59*	n.a.	n.a.	n.a.	n.a.	n.a.	*1967*	n.a.	n.a.	n.a.	n.a.	n.a.
EMPLOYMENT & UNEMPLOYMENT												
Civilian Labor Force[14, 15]	*Thousands*	4,957	4,926	+ 1	— x	— 1	*Thousands*	103,412	103,351	+ x	+ 2	+ 2
Civilian Employment[14, 15]	*Thousands*	4,595	4,602	— x	— 2	— 1	*Thousands*	96,566	96,546	+ x	+ 1	+ 1
Nonagricultural Employment[14, 15]	*Thousands*	4,446	4,438	+ x	— 1	+ x	*Thousands*	93,485	93,584	— x	+ 1	+ 1
Mfg. Prod. Employment[7, 15]	*1967*	72	75	— 3	— 12	— 10	*1967*	101	103	— 2	— 3	— 2
• Mfg. Prod. Payrolls[7, 15]	*1967*	168	174	— 3	— 3	— 7	*1967*	245	251	— 2	+ 5	+ 4
Average Weekly Hours—Mfgr. Prod.[7, 15]	*Number*	40.4	40.8	— 1	+ 2	— 2	*Number*	39.4	39.8	— 1	+ 3	— 1
Unemployment, Total—No.[14, 15]	*Thousands*	363	324	+ 12	+ 32	+ 12	*Thousands*	6,846	6,805	+ 1	+ 23	+ 12
Unemployment, Total—Rate[14, 15]	*Percent*	7.3	6.6				*Percent*	6.6	6.6			
Unemployment, Insured[14, 15]	*Thousands*	193	198	— 3	+ 65	+ 57	*Thousands*	3,627	3,652	— 1	+ 39	+ 24
Registered for Work, O.B.E.S.[14]	*Thousands*	384	379	+ 1	+ 15	+ 14		b	b	b	b	b
Unemployment Compensation Fund[14]	*Mil. Dol.*	247	285	— 33	— 13	— 15		b	b	b	b	b
PRODUCTION												
Gross National Product (Quarterly)[13]		b	b	b	b	b	*Bil. Dol.[d, h]*	n.a.	2,520	n.a.	n.a.	n.a.
Industrial Production[7, 11]	*1967*	c	c	— 4	— 11	— 13	*1967[d]*	149	151	— 2	— 2	— x
• Steel Production[18]	*Thous. Tons*	1,596	1,600	— x	— 17	— 15	*Thous. Tons*	10,658	11,439	— 7	— 13	— 7
Electric Power Production[8]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	*Mil. KWH*	n.a.	n.a.	n.a.	n.a.	n.a.
Bituminous Coal Production[19]	*Thous. Tons*	4,197	3,788	+ 11	+ 17	— 1	*Thous. Tons*					
Pig Iron Production[18]	*Thous. Tons*	1,065	1,042	+ 2	— 15	— 15	*Thous. Tons*	6,677	7,115	— 6	— 14	— 9
Machine Tools—Shipments[20]		b	b	b	b	b	*Mil. Dol.*	344.00	460.00	— 25	+ 13	+ 28
Machine Tools—New Orders[20]		b	b	b	b	b	*Mil. Dol.*	414.95	528.65	— 22	— 10	+ x
Durable Goods—New Orders[13]		b	b	b	b	b	*Mil. Dol.[d]*	72,458	77,546	— 7	— 5	— 2
CONSTRUCTION (Value of Contracts)												
• Total (Seas. Adj.)[9, 21]	*1967[d]*						*1967[d]*					
Total[9, 21]	*1967[f]*	160	159	+ x	— 45	— 17	*Mil. Dol.*	11,071	11,286	— 2	— 34	— 24
Residential Building[9, 21]	*1967[f]*	133	143	— 7	— 60	— 39	*Mil. Dol.*	4,373	4,585	— 5	— 39	— 25
Nonresidential Building[9, 21]	*1967[f]*	136	159	— 14	— 32	+ 4	*Mil. Dol.*	4,063	4,273	— 5	— 5	+ 3
Utilities and Non-Building Const.[9, 21]	*1967[f]*	284	200	+ 42	— 34	— 14	*Mil. Dol.*	2,635	2,429	+ 9	— 50	— 46
DISTRIBUTION												
Total Retail Sales[2, 13]	*1957–59[d]*	283	289	— 2	— 1	+ 2	*Mil. Dol.[d]*	74,774	76,534	— 2	+ 4	+ 8
Department Store Sales[2, 13]	*1957–59[d]*	248	281	— 12	+ 1	+ 1	*Mil. Dol.[d]*	7,448	7,564	— 2	+ 4	+ 10
• New Passenger Cars Registered[3, 22]	*1967*	96	107	— 10	— 31	— 15	*No.–49 sts.*	783,741	797,955	— 2	— 18	— 11
New Trucks Registered[3, 22]	*No.–44 cos.*	4,575	4,388	+ 4	— 42	— 40	*No.–48 sts.*	220,595	219,400	+ 1	— 29	— 26
Used Cars Registered[3]	*No.–33 cos.*	33,070	33,045	+ x	— 21	— 4		b	b	b	b	b
PRICES												
Consumer Price Index[15]:												
All Urban Consumers		b	b	b	b	b	*1967*	243	240	+ 1	+ 15	+ 14
Wage Earners & Clerical Workers		b	b	b	b	b	*1967*	243	240	+ 1	+ 15	+ 14
Producer Price Index[15]:												
All Commodities		b	b	b	b	b	*1967*	262	262	+ x	+ 14	+ 15
Finished Goods		b	b	b	b	b	*1967*	240	238	+ 1	+ 14	+ 13
Intermediate Materials		b	b	b	b	b	*1967*	275	273	+ x	+ 16	+ 18
Crude Materials		b	b	b	b	b	*1967*	297	303	— 2	+ 6	+ 11
Sensitive Indus. Commodities[15]		b	b	b	b	b	*1967*	302	317	— 5	+ 3	+ 13
BANKING AND FINANCE												
• Bank Loans, Large Banks—Total[11]	*Mil. Dol.*	25,803	25,787	+ x	+ 20	+ 21	*Mil. Dol.*	411,475	412,686	— x	+ 13	+ 15
" " " " Bus. & Agric.[11]	*Mil. Dol.*	9,378	9,271	+ 1	+ 20	+ 21	*Mil. Dol.*	166,147	166,171	— x	+ 16	+ 18
Stock Price Index—400 Indust.[23]		b	b	b	b	b	*1941–43 = 10*	113.7	118.3	— 4	+ x	+ 9
" " " 40 Utils.[23]		b	b	b	b	b	*1941–43 = 10*	48.5	45.6	+ 6	— 3	— 4
" " " 20 Trans.[23]		b	b	b	b	b	*1970 = 10*	14.6	15.5	— 6	+ 3	+ 15
Yield, Corp. AAA Bonds[23]		b	b	b	b	b	*Percent*	11.09	12.49	— 3	+ 34	+ 30

• Indicates series charted (page S-1). For sources and footnotes, see page S-3.

Business Conditions in the 8 Largest OHIO CITIES

ITEM	Unit or Index Base Period	Apr. 1980 (p)	Mar. 1980 (r)	Change From Last Year: Apr. 1980 from Apr. 1979	Change From Last Year: 4 months 1980 from 1979	Apr. 1980 (p)	Mar. 1980 (r)	Change From Last Year: Apr. 1980 from Apr. 1979	Change From Last Year: 4 months 1980 from 1979	Apr. 1980 (p)	Mar. 1980 (r)	Change From Last Year: Apr. 1980 from Apr. 1979	Change From Last Year: 4 months 1980 from 1979	Apr. 1980 (p)	Mar. 1980 (r)	Change From Last Year: Apr. 1980 from Apr. 1979	Change From Last Year: 4 months 1980 from 1979
		AKRON				**CANTON**				**CINCINNATI**				**CLEVELAND**			
				%	%			%	%			%	%			%	%
Number Employed[7]:																	
Total[w]	*1967*	79	80	— 3	— 5	95	93	— 3	— 3	86	76	— 3	— 6	86	89	— 8	— 5
Manufacturing	"	57	57	— 9	— 10	87	86	— 6	— 6	64	65	— 17	— 17	66	71	— 18	— 12
Trade, Serv., & Utils.	"	109	111	+ 2	— x	109	108	+ 2	+ 1	109	87	+ 9	+ 3	108	109	— x	+ x
Construction	"	50	47	— 16	— 6	77	74	— 8	— 9	69	70	— 22	— 8	69	63	— 4	— 1
Payrolls[7]:																	
Total[w]	"	172	170	+ 13	+ 2	236	227	+ 4	+ 2	215	200	+ 1	— 5	197	204	— 4	— 3
• Manufacturing	"	126	124	+ 11	— 4	210	213	— 1	— 2	156	158	— 14	— 18	143	155	— 17	— 15
Trade, Serv., & Utils.	"	267	266	+ 16	+ 7	308	304	+ 11	+ 7	297	257	+ 16	+ 7	271	274	+ 7	+ 8
Construction	"	111	105	— 6	+ 1	184	178	+ 16	+ 11	174	179	— 15	+ 2	179	164	+ 4	+ 10
Emp. Earn.—Gross Wkly.[7]:																	
All Industries[w]	$	329.12	320.87	+ 19	+ 8	321.63	327.30	+ 5	+ 4	289.62	307.12	+ 6	+ 2	354.54	356.55	+ 5	+ 3
Manufacturing	"	382.06	372.39	+ 23	+ 8	352.69	361.36	+ 4	+ 3	335.22	333.03	+ 6	+ 1	374.90	375.93	+ 3	— 3
Trade, Serv., & Utils.	"	255.23	247.77	+ 14	+ 8	256.46	257.82	+ 6	+ 5	227.98	266.57	+ 5	+ 1	321.92	324.84	+ 7	+ 8
Construction	"	422.11	425.15	+ 12	+ 8	450.14	451.56	+ 16	+ 12	446.24	447.64	+ 9	+ 11	472.30	474.98	+ 9	+ 11
Retail Sales[2]	%	c	c	— 8	+ 1	c	c	— 3	+ 2	c	c	— 2	+ 2	c	c	— 8	— 3
Auto Titles[3]:																	
New Cars	*No.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4,221	4,473	— 26	— 14	6,748	7.160	— 30	— 18
New Trucks	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	636	578	— 36	— 40	671	654	— 39	— 35
Retail Food Prices[15]	*1967*	b	b	b	b	b	b	b	b	262	260	+ 6	+ 6	250	250	+ 4	+ 5
Bank Debits[5]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	*No.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	*Thous. $*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	*1967[f]*	140	137	— 3	— 7	b	b	b	b	b	b	b	b	b	b	b	b
Value of Bldg. Const.[9]:																	
Total	"	161	167	— 43	— 25	182	102	— 23	— 19	71	152	— 86	— 41	87	96	— 16	+ 24
Residential	"	138	203	— 53	— 24	197	127	— 18	— 17	44	73	— 90	— 60	45	83	— 55	— 24
Nonresidential	"	184	129	— 33	— 26	163	71	— 30	— 21	95	223	— 83	— 29	125	108	+ 19	+ 51
Steel Production[18]	*1967[g]*	b	b	b	b	b	b	b	b	107	90	+ 8	— 8	124	126	— 13	— 6
Labor Force Estimates[14]:																	
Civilian Labor Force	*Thous.*	237.0	237.5	— 1	— x	170.6	170.3	+ 2	+ 2	416.6	413.0	— 2	— 2	727.4	725.0	— 2	— 2
Civilian Employment	"	220.2	220.9	— 2	— 1	158.2	158.9	— x	+ 1	390.4	391.1	— 3	— 2	682.1	684.3	— 3	— 3
Unemp. Total—No.	"	16.8	16.6	+ 16	+ 9	12.4	11.4	+ 41	+ 15	26.2	22.0	+ 33	+ x	45.3	40.7	+ 23	+ 8
Unemp., Total—Rate	%	7.1	7.0			7.3	6.7			6.3	5.3			6.2	5.6		
		COLUMBUS				**DAYTON**				**TOLEDO**				**YOUNGSTOWN**			
				%	%			%	%			%	%			%	%
Number Employed[7]:																	
Total[w]	*1967*	98	101	— 7	— 3	104	104	— 2	— 2	91	93	— 11	— 9	81	81	— 5	— 4
Manufacturing	"	63	71	— 18	— 11	66	68	— 9	— 8	61	65	— 33	— 26	51	51	— 12	— 12
Trade, Serv., & Utils.	"	123	125	— 3	— 1	160	160	+ 2	+ 2	121	121	+ 4	+ 1	120	121	— 1	— x
Construction	"	68	63	+ 4	+ 12	84	69	+ 1	+ 5	73	68	+ 2	+ 17	50	45	+ 3	— 7
Payrolls[7]:																	
Total[w]	"	231	241	+ 1	+ 3	206	210	+ 7	+ 3	217	217	— 4	— 7	185	183	+ 1	+ 1
• Manufacturing	"	135	156	— 10	— 7	143	154	+ 3	— 4	135	138	— 26	— 28	131	128	— 7	— 7
Trade, Serv., & Utils.	"	324	328	+ 4	+ 6	346	339	+ 9	+ 9	336	331	+ 13	+ 9	296	299	+ 6	+ 9
Construction	"	159	147	+ 17	+ 27	203	169	+ 23	+ 18	171	169	+ 13	+ 27	132	123	+ 26	— 3
Emp. Earn.—Gross Wkly.[7]:																	
All Industries[w]	$	280.62	284.47	+ 9	+ 7	349.50	360.49	+ 10	+ 5	343.09	334.94	+ 12	+ 5	317.61	317.22	+ 6	+ 5
Manufacturing	"	336.41	343.67	+ 12	+ 6	380.43	403.63	+ 11	+ 3	377.16	350.92	+ 13	— 1	362.69	357.46	+ 4	+ 4
Trade, Serv., & Utils.	"	234.04	234.84	+ 6	+ 7	294.88	288.79	+ 7	+ 7	297.88	293.56	+ 13	+ 12	244.55	246.84	+ 7	+ 9
Construction	"	380.35	392.02	+ 10	+ 13	432.73	440.07	+ 23	+ 13	458.77	481.87	+ 8	+ 7	457.75	478.91	+ 16	+ 2
Retail Sales[2]	%	c	c	— 7	— 1	n.a.	n.a.	n.a.	n.a.	c	c	— 5	— 2	c	c	— 3	— 2
Auto Titles[3]:																	
New Cars	*No.*	4,062	4,604	— 25	— 14	2,540	2,785	— 28	— 13					1,180	1,181	— 34	— 21
New Trucks	"	877	747	— 13	— 21	319	273	— 39	— 53					283	204	— 8	— 22
Retail Food Prices[15]	*1967*	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
Bank Debits[5]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	*No.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	*Thous. $*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	*1967[f]*	b	b	b	b	b	b	b	b	135	148	— 12	— 10	75	87	— 17	— 11
Value of Bldg. Const.[9]:																	
Total	"	99	231	— 67	— 8	198	84	+ 62	+ 42	156	63	— 26	— 33	208	51	— 7	— 10
Residential	"	146	146	— 70	— 25	166	84	+ 9	— 40	185	107	— 48	— 49	207	25	— 5	— 48
Nonresidential	"	52	315	— 60	+ 12	238	84	+183	+112	140	40	+ 7	— 14	208	81	— 9	+ 41
Steel Production[18]	*1967[g]*	b	b	b	b	b	b	b	b	b	b	b	b	71	68	— 17	— 21
Labor Force Estimates[14]:																	
Civilian Labor Force	*Thous.*	423.4	423.1	— 2	— 2	266.3	265.7	— 1	— 1	218.8	217.0	— 1	— 2	128.8	127.4	— 1	— 2
Civilian Employment	"	403.4	404.7	— 2	— 1	247.3	248.3	— 2	— 2	195.8	198.2	— 5	— 4	115.7	116.0	— 5	— 4
Unemp. Total—No.	"	20.0	18.4	— 3	— 15	19.1	17.4	+ 5	+ 14	23.0	18.8	+ 64	+ 26	13.0	11.3	+ 56	+ 19
Unemp., Total—Rate	%	4.7	4.3			7.2	6.5			10.5	8.6			10.1	8.9		

NOTE: All data are for county areas except bank debits and commercial failures, which are for areas within city limits. The indexes of number employed and payrolls and the employee weekly earnings are based on data for production workers in manufacturing, construction workers in contract construction, and nonsupervisory employees in other categories which exclude agriculture, government, education, and public institutions.

• Indicates series charted (page S-1). For sources and footnotes, see page S-3.

Number Employed, Payrolls, and Man-Hours in Ohio Industry

INDUSTRIAL GROUP	NUMBER EMPLOYED[7]					PAYROLLS[7]					MAN-HOURS[7]				
	Index (1967 = 100)		Change			Index (1967 = 100)		Change			Index (1967 = 100)		Change		
	Apr. 1980 (p)	Mar. 1980 (r)	Apr. 1980 from Mar. 1980	Apr. 1980 from Apr. 1979	4 months 1980 from 1979	Apr. 1980 (p)	Mar. 1980 (r)	Apr. 1980 from Mar. 1980	Apr. 1980 from Apr. 1979	4 months 1980 from 1979	Apr. 1980 (p)	Mar. 1980 (r)	Apr. 1980 from Mar. 1980	Apr. 1980 from Apr. 1979	4 months 1980 from 1979
			%	%	%			%	%	%			%	%	%
Total[w] (2,358)[a]	85	85	— 1	— 6	— 5	193	195	— 1	— 2	+ x	81	82	— 1	— 5	— 6
All Manufacturing[w] (1,282)	72	75	— 3	— 12	— 10	168	174	— 3	— 3	— 7	66	69	— 4	— 11	— 13
Chemicals (68)	97	79	+ 23	+ 2	— 10	208	164	+ 26	+ x	— 14	89	75	+ 19	— 4	— 15
Food Products (88)	77	78	— 2	— 2	— 2	188	190	— 1	+ 15	+ 7	67	68	— 1	+ 3	— 3
Bakery	70	69	+ 1	— 5	— 1	168	166	+ 1	+ 9	+ 9	66	65	+ 2	— 1	— x
Miscellaneous	77	79	— 2	— 2	— 3	190	193	— 1	+ 16	+ 7	66	68	— 2	+ 4	— 3
Lumber Products (43)	89	89	— x	— 12	— 12	189	187	+ 1	+ 5	— 1	82	81	+ 1	— 7	— 11
Furniture	99	100	— x	— 11	— 13	212	209	+ 2	+ 7	+ x	97	97	+ 1	— 5	— 10
Miscellaneous	71	71	+ x	— 14	— 12	151	152	— x	— 1	— 5	59	59	+ x	— 12	— 13
Machinery (298)	71	75	— 5	— 9	— 4	157	168	— 6	+ 7	+ 4	67	71	— 6	— 5	— 5
Elec. Mach., Apparatus and Supplies	77	84	— 8	— 10	— 2	179	198	— 10	+ 9	+ 7	72	80	— 10	— 3	— 2
Machine Tools	65	65	— x	+ 2	+ 1	149	154	— 3	+ 17	+ 11	66	68	— 2	+ 6	+ 1
Agricultural Equipment	37	49	— 24	— 33	— 14	89	114	— 22	— 21	— 3	41	55	— 26	— 32	— 14
Special Machinery and Appliances	67	68	— 2	— 10	— 7	139	141	— 2	+ 2	— x	62	63	— 2	— 8	— 9
Metal Products (349)	81	82	— 2	— 11	— 10	192	194	— 1	— 2	— 7	73	74	— 2	— 10	— 13
Foundry Products and Drop Forgings	92	93	— 1	— 13	— 14	230	234	— 2	— 12	— 16	74	75	— 2	— 17	— 19
Pipes, Valves, and Plumbers' Supplies	69	71	— 3	— 24	— 15	183	191	— 4	— 8	— 9	77	80	— 3	— 18	— 17
Screw Machine Products and Hdwe.	88	92	— 5	— 13	— 10	162	176	— 8	— 8	— 10	82	88	— 7	— 16	— 16
Sheet Metal Work	80	83	— 4	— 18	— 18	182	193	— 6	+ 4	— 13	67	71	— 6	— 6	— 18
Steel Works and Rolling Mills	77	77	+ x	— 4	— 5	184	176	+ 4	— 1	— 3	72	70	+ 3	— 9	— 10
Stoves and Furnaces	76	89	— 14	— 32	— 25	156	178	— 12	— 23	— 16	79	90	— 12	— 30	— 24
Miscellaneous	78	80	— 2	— 11	— 9	181	188	— 3	+ x	— 4	67	70	— 3	— 8	— 10
Paper and Printing (135)	62	65	— 3	— 7	— 5	162	162	+ x	+ 5	+ 2	58	59	— 2	— 7	— 7
Paper and Pulp	43	49	— 11	— 6	— 1	163	154	+ 6	+ 11	+ 8	38	39	— 3	— 5	— 3
Printing and Publishing	75	75	+ x	— 5	— 5	170	168	+ 1	— x	— 1	68	67	+ 2	— 5	— 6
Miscellaneous	64	65	— 2	— 8	— 6	153	157	— 3	+ 4	+ 1	62	65	— 4	— 8	— 9
Rubber Products (53)	61	63	— 3	— 14	— 13	148	154	— 4	— 7	— 11	55	57	— 4	— 13	— 17
Tires and Tubes	47	47	+ 1	— 12	— 8	103	101	+ 2	— 5	— 9	35	35	— x	— 13	— 14
Miscellaneous	69	73	— 5	— 15	— 15	181	196	— 8	— 8	— 12	71	76	— 6	— 13	— 18
Stone, Clay, and Glass Products (93)	72	74	— 3	— 5	— 4	178	184	— 3	+ 1	+ 1	77	80	— 4	— 7	— 6
Brick and Tile	52	53	— 3	— 15	— 12	109	113	— 3	— 13	— 7	52	54	— 4	— 19	— 15
Glass	77	79	— 2	— 1	— 4	178	183	— 3	+ 2	+ x	77	79	— 2	— 2	— 4
Vitreous & Semi-vit. China & Pottery	53	57	— 6	— 6	— 2	163	172	— 5	+ 9	+ 9	81	88	— 8	— 4	— 3
Miscellaneous	83	83	— 1	— 8	— 4	207	213	— 3	— 5	— 1	83	86	— 3	— 12	— 9
Textiles (37)	69	72	— 5	— 10	— 8	106	114	— 7	+ x	— 5	67	72	— 7	— 6	— 10
Men's Clothing	82	81	+ 1	— 4	— 4	114	114	— 1	— 1	— 5	74	74	+ x	— 7	— 11
Miscellaneous	61	67	— 10	— 14	— 10	103	119	— 13	+ 1	— 5	62	71	— 13	— 5	— 9
Vehicles (62)	57	70	— 18	— 39	— 31	140	173	— 19	— 34	— 34	50	62	— 19	— 38	— 36
Autos and Parts	58	76	— 23	— 46	— 37	148	193	— 23	— 42	— 41	50	66	— 24	— 46	— 43
Cars, Electric and Steam Railway	99	95	+ 4	— 10	— 4	221	206	+ 7	— 8	— 1	86	82	+ 4	— 15	— 7
Miscellaneous	61	61	+ 1	+ 22	+ 23	140	140	+ x	+ 45	+ 37	60	61	— 1	+ 26	+ 22
Miscellaneous Manufacturing (56)	62	63	— 3	— 9	— 8	144	146	— 1	+ 6	+ 6	59	60	— 2	— 6	— 5
Total Trade, Service, and Utilities[w] (704)	102	101	+ 1	— x	— x	237	234	+ 1	+ 8	+ 7	104	103	+ 1	— x	+ x
Service (209)	125	119	+ 5	+ 3	+ 4	263	253	+ 4	+ 11	+ 12	136	132	+ 2	+ 3	+ 4
Trade, Retail and Wholesale (386)	87	89	— 1	— 4	— 3	202	200	+ 1	+ 3	+ 3	86	86	— x	— 4	— 3
Transportation & Public Utilities (109)	108	109	— x	+ 4	+ 1	297	298	— x	+ 14	+ 9	107	108	— 1	+ 4	+ x
Construction (344)	63	59	+ 7	— 5	+ 2	160	153	+ 4	+ 11	+ 18	58	54	+ 6	+ 2	+ 9
Mines and Quarries (28)	121	126	— 4	— 6	— 2	290	282	+ 3	+ 8	+ 9	77	79	— 2	— 1	— 1

Indexes of number employed and of payrolls are based on the employment of 479,902 persons (production workers in manufacturing and mining, construction workers in contract construction, and nonsupervisory employees in other categories) in 2,358 firms; indexes of man-hours, on the employment of 465,286 production workers and nonsupervisory employees in 2,256 firms. Figures in parentheses show number of firms reporting employment and payrolls. In some cases fewer firms report man-hours. Data do not include agriculture, government, education, or public institutions. For sources and footnotes, see below.

FOOTNOTES FOR BULLETIN TABLES AND CHARTS

†Change in number of failures: [a]Figures in parentheses show number of firms reporting this month; [n.a.]Current data not available; [b]Comparable data not available; [c]Only percentage of change available; [d]Adjusted for seasonal change; [e]Adjusted for number of working days; [g]Four weeks average; [h]Annual rate; [p]Preliminary; [r]Revised; [s]Series revised; [w]Weighted; [x]Less than 0.5 percent; [y]More than 1,000 percent increase.

Primary Sources:

Computed from: [1]Center for Business and Economic Research multiple regression model.

Computed from original data collected by the Center for Business and Economic Research from: [2]Ohio retailers; [3]County Clerks of Courts; [4]Local Power and Light Companies.

Computed by the Center for Business and Economic Research from data supplied by: [5]Board of Governors of the Federal Reserve System; [6]Life Insurance Marketing and Research Association; [7]Division of Research and Statistics of the Ohio Bureau of Employment Services, collected in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor; [8]Federal Power Commission; [9]F. W. Dodge Division, McGraw-Hill Information Systems Company; [10]Dun & Bradstreet, Inc.

Other data sources: [11]Federal Reserve Board; [12]Dun & Bradstreet, Inc.; [13]U.S. Department of Commerce; [14]Division of Research and Statistics of the Ohio Bureau of Employment Services; [15]U.S. Department of Labor; [16]Department of Agricultural Economics, O.S.U.; [17]U.S. Department of Agriculture; [18]American Iron and Steel Institute; [19]U.S. Department of Energy; [20]National Machine Tool Builders' Association; [21]F. W. Dodge Division, McGraw-Hill Information Systems Company; [22]R. L. Polk & Co.; [23]Standard & Poor's Corporation.

Note: In the Ohio-U.S. table, page S-2, dual source notes on a single line of the table stub refer first to Ohio data, second to U.S. data.

Ohio Retail Sales Trends

April Sales of Ohio Retailers declined 1 percent from March sales, and after adjustment for seasonal variation the April index was down 2 percent from the March index. Current April sales were 2 percent lower than year-ago April sales, due somewhat to the earlier date of Easter in 1980 (April 6, 1980, vs. April 15, 1979) which would account for less pre-Easter buying during April this year.

For the First Four Months of 1980, sales totaled 2 percent above 4-month sales in 1979.

By Kind of Business, the drop-off in sales by motor vehicle dealers continues to be highly significant in the state-wide sales picture, with consistent declines occurring in April from March (—4 percent), April from year-ago April (—27 percent), and 4-months 1980 from 4-months 1979 (—17 percent). The only other lines down currently in all three comparisons were women's-ready-to-wear stores and shoe stores. On the other hand, 7 categories showed gains consistently in the current month and year-to-date periods—general stores; men's clothing stores; family clothing stores; paint, glass, and wallpaper stores; hardware stores; drug stores; and hay-feed, farm and garden supply stores.

INDEXES OF OHIO RETAIL SALES

KIND OF BUSINESS	UNADJUSTED INDEX (1957–59 = 100)		CHANGE			
			Apr. 1980 from Mar. 1980		Apr. 1980 from Apr. 1979	4 months 1980 from 1979
	Apr. 1980 (p)	Mar. 1980 (r)	Not Seas. Adj.	Seas. Adj.		
				%	%	%
Total Retail Stores[2] [w]	**279**	**283**	**— 1**	**— 2**	**— 2**	**+ 2**
Grocery Stores	317	328	— 3	— 1	+10	+11
Other Food Stores	316	367	—14	—13	+ 6	+13
General Stores (With Food)	190	171	+11	+ 9	+34	+37
Department Stores	225	257	—13	—12	— 4	+ 1
Other General Merchandise	232	240	— 3	—10	+ 6	+15
Men's Clothing-Furns. Stores	111	92	+21	+12	+ x	+ 1
Family Clothing Stores	159	150	+ 6	+15	+29	+11
Women's Ready-to-Wear Stores	117	125	— 6	— 1	—10	— 4
Shoe Stores	109	110	— 1	+ 2	— 6	— 1
Furniture Stores	213	248	—14	—17	+ 3	+ 4
Household Appl. TV-Rdio Strs.	156	192	—19	—21	—10	+ x
Home Furnishings Stores	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Motor Vehicle Dealers	295	308	— 4	— 2	—27	—17
Other Automotive	156	134	+16	+16	+ 3	—10
Filling Stations	430	456	— 6	— 5	+11	+ 9
Lumber Bldg. Matls. Dealers	225	187	+20	— 3	—19	— 6
Paint, Glass & Wallpaper Strs.	206	162	+27	+ 9	+25	+22
Heat. Plumb. & Elec. Sup. Strs.	189	220	—14	—17	+10	+24
Hardware Stores	260	204	+27	+ 4	+13	+ 3
Farm Equipment Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Eating & Drinking Places	199	217	— 8	— 9	— 4	+ 2
Drug Stores	346	264	+31	+33	+42	+17
Jewelry Stores	146	157	— 7	—10	— 4	+11
Florists	230	153	+50	+27	—10	— 5
Fuel Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hay-Feed, Farm & Grdn. Strs.	655	515	+27	+11	+21	+ 4
State Liquor Stores	154	157	— 2	— 2	+ 9	+ 5

For sources and footnotes, see page S-3.

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TABLE 4
TOTAL PERSONAL INCOME, 17 STANDARD METROPOLITAN STATISTICAL AREAS CONTAINING OHIO COUNTIES, 1973-1978

SMSA or Ohio Portion	Total Personal Income *(Million Dollars)*						Percent of Ohio Total	Percent Increase
	1973	1974	1975	1976	1977	1978	1978	1978 from 1973
Akron, OH	3,335.5	3,609.0	3,806.0	4,134.8	4,603.2	5,095.6	6.03	53
Canton, OH	1,910.4	2,108.4	2,234.6	2,447.8	2,712.4	3,040.0	3.60	59
Cincinnati, OH-KY-IN	6,973.0	7,604.6	8,178.6	8,997.8	9,933.4	11,201.4	a	61
Clermont, Hamilton, Warren Counties, OH	*5,687.3*	*6,202.7*	*6,658.0*	*7,307.8*	*8,050.1*	*9,067.6*	*10.74*	*59*
Cleveland, OH	11,606.8	12,676.0	13,326.2	14,605.0	16,054.9	17,846.2	21.13	54
Columbus, OH	5,192.8	5,662.7	6,044.8	6,674.3	7,468.1	8,278.2	9.80	59
Dayton, OH	4,354.7	4,616.0	4,933.7	5,499.3	6,060.1	6,660.9	7.89	53
Hamilton-Middletown, OH	1,082.9	1,198.3	1,304.3	1,476.4	1,655.1	1,811.0	2.14	67
Huntington-Ashland, WV-KY-OH	1,169.7	1,321.5	1,459.8	1,661.9	1,346.2	2,075.6	a	77
Lawrence County, OH	*218.1*	*244.9*	*263.3*	*296.4*	*327.6*	*369.0*	*0.44*	*69*
Lima, OH	1,023.5	1,116.7	1,179.5	1,306.2	1,461.3	1,644.0	1.95	61
Lorain-Elyria, OH	1,293.2	1,418.1	1,505.6	1,678.8	1,922.9	2,132.1	2.52	65
Mansfield, OH	652.1	680.0	701.8	781.2	887.7	968.3	1.15	48
Parkersburg-Marietta, WV-OH	631.0	731.9	778.9	876.4	987.3	1,122.6	a	78
Washington County, OH	*228.5*	*268.0*	*284.4*	*324.5*	*361.9*	*406.6*	*0.48*	*78*
Springfield, OH	874.2	941.1	1,000.8	1,094.7	1,202.7	1,331.1	1.58	52
Steubenville-Weirton, OH-WV	759.0	878.9	949.5	1,066.7	1,175.4	1,274.9	a	68
Jefferson County, OH	*426.3*	*489.0*	*533.0*	*596.2*	*654.4*	*706.0*	*0.84*	*66*
Toledo, OH-MI	4,026.6	4,308.8	4,596.6	5,125.0	5,677.0	6,276.4	a	56
Fulton, Lucas, Ottawa, Wood Counties, OH	*3,411.5*	*3,657.7*	*3,897.3*	*4,334.7*	*4,761.8*	*5,258.5*	*6.23*	*54*
Wheeling, WV-OH	822.0	900.8	993.1	1,117.3	1,238.8	1,366.6	a	66
Belmont County, OH	*360.6*	*396.0*	*440.3*	*496.7*	*548.8*	*604.4*	*0.72*	*68*
Youngstown-Warren, OH	2,745.1	2,981.2	3,104.5	3,459.5	3,827.4	4,239.0	5.02	54
SMSA COUNTIES, OHIO	44,403.6	48,265.8	51,218.2	56,514.4	62,560.4	69,458.6	82.24	56
NON-SMSA COUNTIES, OHIO	9,210.4	10,114.7	10,736.4	12,024.5	13,407.7	14,997.0	17.76	63
OHIO, TOTAL	53,614.0	58,380.5	61,954.6	68,539.0	75,968.1	84,455.6	100.00	58

[a] Not applicable.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Measurement Division.

TABLE 5
PER CAPITA PERSONAL INCOME, 17 STANDARD METROPOLITAN STATISTICAL AREAS CONTAINING OHIO COUNTIES, 1973-1978

SMSA or Ohio Portion	Per Capita Personal Income *(Dollars)*						Percent of Ohio Avg.	Percent Change
	1973	1974	1975	1976	1977	1978	1978	1978 from 1973
Akron, OH	4,941	5,388	5,666	6,216	6,985	7,756	99	57
Canton, OH	4,782	5,174	5,537	6,104	6,751	7,530	96	57
Cincinnati, OH-KY-IN	5,030	5,512	5,969	6,542	7,198	8,064	a	60
Clermont, Hamilton, Warren Counties OH	*5,155*	*5,652*	*6,128*	*6,706*	*7,372*	*8,256*	*105*	*60*
Cleveland, OH	5,787	6,384	6,748	7,460	8,250	9,204	117	59
Columbus, OH	4,920	5,310	5,633	6,218	6,922	7,602	97	55
Dayton, OH	5,140	5,496	5,874	6,579	7,289	7,985	102	55
Hamilton-Middletown, OH	4,535	4,956	5,327	6,008	6,617	7,064	90	56
Huntington-Ashland, WV-KY-OH	4,035	4,568	5,052	5,652	6,214	6,920	a	71
Lawrence County, OH	*3,641*	*4,073*	*4,456*	*4,841*	*5,306*	*5,925*	*75*	*63*
Lima, OH	4,836	5,276	5,526	6,198	6,913	7,768	99	61
Lorain-Elyria, OH	4,897	5,311	5,641	6,391	7,175	7,861	100	61
Mansfield, OH	4,986	5,214	5,363	5,970	6,821	7,432	95	49
Parkersburg-Marietta, WV-OH	4,203	4,863	5,122	5,747	6,426	7,118	a	69
Washington County, OH	*3,889*	*4,537*	*4,728*	*5,443*	*6,030*	*6,622*	*84*	*70*
Springfield, OH	4,617	5,009	5,368	5,962	6,580	7,267	92	57
Steubenville-Weirton, OH-WV	4,560	5,331	5,720	6,478	7,174	7,870	a	73
Jefferson County, OH	*4,441*	*5,162*	*5,603*	*6,347*	*7,008*	*7,587*	*97*	*71*
Toledo, OH-MI	5,158	5,506	5,880	6,625	7,333	8,090	a	57
Fulton, Lucas, Ottawa, Wood Counties, OH	*5,201*	*5,561*	*5,946*	*6,704*	*7,390*	*8,164*	*104*	*57*
Wheeling, WV-OH	4,493	4,960	5,469	6,130	6,844	7,546	a	68
Belmont County, OH	*4,378*	*4,830*	*5,339*	*6,016*	*6,711*	*7,397*	*94*	*69*
Youngstown-Warren, OH	5,060	5,422	5,785	6,401	7,059	7,767	99	53
SMSA COUNTIES, OHIO	5,154	5,607	5,969	6,617	7,330	8,113	103	57
NON-SMSA COUNTIES, OHIO	4,326	4,734	4,983	5,595	6,204	6,858	87	59
OHIO, AVERAGE	4,990	5,433	5,771	6,411	7,102	7,857	100	57

[a] Not applicable.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Measurement Division.

Personal Income Estimates *(Continued from page 5)*

TABLE 6
POPULATION, 17 STANDARD METROPOLITAN STATISTICAL AREAS CONTAINING OHIO COUNTIES, 1973-1978

SMSA or Ohio Portion	Population *(Thousands)* 1973	1974	1975	1976	1977	1978	1978 Ohio Total Percent of	1978 from 1973 Change Percent
Akron, OH	675.0	669.9	671.7	665.2	659.1	657.0	6.11	—2.7
Canton, OH	399.5	407.5	403.5	401.0	401.8	403.7	3.76	1.1
Cincinnati, OH-KY-IN	1,386.4	1,379.7	1,370.2	1,375.5	1,380.1	1,389.1	a	0.2
Clermont, Hamilton, Warren Counties, OH	*1,103.3*	*1,097.4*	*1,086.4*	*1,089.7*	*1,092.0*	*1,098.3*	*10.22*	*—0.5*
Cleveland, OH	2,005.6	1,985.6	1,974.9	1,957.7	1,946.0	1,938.9	18.04	—3.3
Columbus, OH	1,055.4	1,066.4	1,073.[illegible]	1,073.5	1,078.8	1,088.9	10.13	3.2
Dayton, OH	847.2	839.8	839.9	835.9	831.4	834.2	7.76	—1.5
Hamilton-Middletown, OH	238.8	241.8	244.8	245.7	250.1	256.4	2.39	7.4
Huntington-Ashland, WV-KY-OH	289.9	289.3	288.9	294.1	297.1	299.9	a	3.4
Lawrence County, OH	*59.9*	*60.1*	*59.1*	*61.2*	*61.8*	*62.3*	*0.58*	*4.0*
Lima, OH	211.7	211.7	213.5	210.7	211.4	211.6	1.97	— b
Lorain-Elyria, OH	264.1	267.0	266.9	262.7	268.0	271.2	2.52	2.7
Mansfield, OH	130.8	130.4	130.9	130.8	130.1	130.3	1.21	—0.4
Parkersburg-Marietta, WV-OH	150.1	150.5	152.1	152.5	153.6	157.7	a	5.1
Washington County, OH	*58.8*	*59.1*	*60.2*	*59.6*	*60.0*	*61.4*	*0.57*	*4.4*
Springfield, OH	189.3	187.9	186.4	183.6	182.8	183.2	1.70	—3.2
Steubenville-Weirton, OH-WV	166.5	164.9	166.0	164.7	163.8	162.0	a	—2.7
Jefferson County, OH	*96.0*	*94.7*	*95.1*	*93.9*	*93.4*	*93.1*	*0.87*	*—3.0*
Toledo, OH-MI	780.6	782.6	781.8	773.6	774.2	775.8	a	—0.6
Fulton, Lucas, Ottawa, Wood Counties, OH	*656.0*	*657.7*	*655.5*	*646.6*	*644.4*	*644.1*	*5.99*	*—1.8*
Wheeling, WV-OH	183.0	181.6	181.6	182.3	181.0	181.1	a	—1.0
Belmont County, OH	*82.4*	*82.0*	*82.5*	*82.6*	*81.8*	*81.7*	*0.76*	*—0.8*
Youngstown-Warren, OH	542.5	549.8	536.6	540.4	542.2	545.8	5.08	0.6
SMSA COUNTIES, OHIO	8,616.2	8,60[illegible]	8,580.8	8,541.1	8,535.0	8,561.9	79.66	—0.6
NON-SMSA COUNTIES, OHIO	2,129.1	2,136.7	2,154.5	2,149.0	2,161.2	2,186.9	20.34	2.7
OHIO, TOTAL	10,745.3	10,745.4	10,735.3	10,690.0	10,696.2	10,748.7	100.00	b

[a] Not applicable. [b] Less than 0.05 percent change.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Measurement Division.

Sources of Income

Personal income is an all encompassing summary of income received by residents of an area from sources that are grouped into the following segments:

- Wages and salary disbursements
- Other labor income
- Proprietors' income
- Dividends, interest, and rent
- Transfer payments

A detailed breakdown of sources of personal income in the state of Ohio by year, 1973 through 1978, appears in Table 7. Similar detailed information and ratios using this data are available for each county and SMSA.

Income Relationship of Ohio Counties, 1978

As would be expected, a large share of total personal income was centered in the major urban counties of Ohio in 1978. Cuyahoga County, with Cleveland as its central city, registered $14.7 billion or 17.4 percent of the $84.5 billion total for personal income in Ohio in 1978. Next highest were Hamilton County (Cincinnati), $7.6 billion and 9.0 percent, and Franklin County (Columbus), $6.7 billion and 8.0 percent. Counties ranging downward to the $2 billion mark were Montgomery (Dayton), 5.6 percent; Summit (Akron), 5.0 percent; Lucas (Toledo), 4.6 percent; Stark (Canton), 3.4 percent; Mahoning (Youngstown), 2.6 percent; Lorain (Lorain-Elyria), 2.5 percent; and Trumbull (Warren), 2.4 percent. Counties between $2 billion and $1 billion were Butler (Hamilton/Middletown), 2.1 percent; Lake (Painesville), 2.0 percent; and Clark (Springfield), 1.3 percent.

At the other end of the array with less than $100 million in total personal income were 4 counties in southeastern Ohio. Vinton County was lowest with $52.1 million, only 0.06 percent of the Ohio total. Next lowest were Noble County, 0.07 percent; Morgan County, 0.10 percent; and Monroe County, 0.11 percent.

Per Capita Income Levels, 1978

The average resident of the state of Ohio in 1978 received $7,857 in personal income, slightly more than the $7,840 per capita income in the entire United States. But within Ohio, wide disparities were evident—ranging from $9,503 per capita income for Cuyahoga County residents to $4,274 per capita income for residents of Adams County. These extremes illustrate the geographic pattern of income distribution within the state—with Cuyahoga representing the northern tier of counties where incomes are higher and Adams representing 28 counties in southern and eastern Ohio that in 1965 were classified by the U.S. Congress in its Appalachian Regional Development Act as a part of Appalachia that needed economic assistance.

In 1978, the only other per capita income less than $5,000 was also in the Appalachian area—$4,759 occurring in Vinton County. And 13 of the 14 counties statewide with per capita income between $5,000 and $6,000 were in the southern/eastern area of the state. In that income range, only Morrow County ($5,837) was outside the Appalachian area. The other thirteen counties in Appalachian Ohio with per capita income above $6,000 were still below the Ohio and U.S. averages.

At the upper end of the scale, ranking below Cuyahoga, were 14 counties with 1978 per capita income between $8,000 and $9,000. The second and third ranking counties, Clinton ($8,691) and Hamilton ($8,572), were in the southwestern region of the state; the fifth ranked, Miami ($8,419), and ninth ranked, Montgomery ($8,160), were in west central Ohio. The other 10 counties above $8,000 were in the northern third of the state.

County Income Percent Changes, 1973-1978

As an indication that the southern/eastern Ohio counties have made economic headway, percent increases from 1973 to 1978 in total personal income in all of the 28 Appalachian counties were higher than the statewide increase of 58 percent. After the 94 percent increase in Medina County in northeastern Ohio, increases in Monroe County (92 percent) and Clermont County (89 percent) were the second largest and third largest, respectively, in the state.

On a per capita basis, the first, third, and fourth highest percentage changes were by counties within the Appalachian area—Monroe (+85 percent), Jefferson (+71 percent), and Washington (+70 percent). Fayette County had the second highest 1978-over-1973 gain (72 percent) in per capita income.

On the lower end of the gains in total personal income from 1973 to 1978 were a southwestern county, Preble with 47 percent, and a north central county, Richland with 48 percent. Over all, a high proportion of counties, 64 out of 88, were above or equal to the state average gain in total income during the six-year span.

The lowest percentage gains in per capita income were scattered around the state, with Preble County again experiencing the least percentage increase (41 percent) and Gallia county showing the next lowest gain (48 percent). Per capita income in 4 counties—Morrow, Richland, Trumbull, and Union—was up 49 percent in 1978 from 1973.

SMSA Income

The 39 Ohio counties that are part of 17 areas classified as Standard Metropolitan Statistical Areas accounted for $69.5 billion or 82.2 percent of Ohio's total personal income in 1978. The remaining $15.0 billion, or 17.8 percent, was distributed through the other 49 counties. The largest SMSA total, including consideration of SMSA data for areas overlapping into other states, was $17.8 billion in the Cleveland SMSA. Next highest was the Cincinnati SMSA (Ohio, Indiana, and Kentucky counties) with $11.2 billion. The 3-county Ohio portion only was $9.1 billion, still higher than the Columbus SMSA figure, $8.3 billion.

On a per capita basis, income in the 39 SMSA counties in Ohio averaged $8,113 in 1978, and income in non-SMSA counties in 1978 averaged $6,858. The Cleveland SMSA had the highest per capita income, $9,204. The Toledo and Cincinnati SMSAs at $8,090 and $8,064 ranked second and third, respectively; but, considering the Ohio portions only, the figures were $8,164 for Toledo and $8,256 for Cincinnati—reversing their rankings.

Ohio's non-SMSA counties experienced a greater percentage rise (63 percent) in total personal income from 1973 to 1978 than did the SMSA counties in Ohio (56 percent). Among individual SMSAs, two SMSAs spanning the Ohio River, Parkersburg-Marietta (+78 percent) and Huntington-Ashland (+77 percent) were ahead of all other Ohio-involved SMSAs in comparisons of total income in 1978 and 1973. The lowest percent gain in SMSAs was by the Mansfield SMSA (+48 percent).

Two SMSAs crossing the Ohio River were at the top of 1978-from-1973 percent increases in per capita income—Steubenville-Weirton (73 percent) and Huntington-Ashland (71 percent). The Mansfield SMSA also experienced the lowest per capita gain (49 percent).

If adjustment for the 47 percent increase in the Consumer Price Index from 1973 to 1978 were applied to changes in per capita income for those years in a manner similar to that used for the comparisons of 1970 and 1979 income on page 1, the current-dollar growth of 57 percent in Ohio would be deflated to real-dollar growth of 7 percent. The U.S. increase in constant dollars per capita income also would be 7 percent, since the current-dollar percent change from 1973 to 1978 was the same as Ohio's.

Area per capita income changes from 1973 to 1978 appearing in Tables 2 and 5 could be adjusted in the same way, by using the following equation:

$$\begin{aligned}&(\text{Area \% change in current \$s} + 100\%)\\ &\div (47\% + 100\%) \times 100\% - 100\%\\ &= \text{Area \% change in constant \$s}\end{aligned}$$

Population, 1973-1978

Population figures in Table 3 and Table 6 are provided for reference. It may be noted, briefly, that statewide population remained at virtually the same level through the 1973-78 period, while population growth from 1973 to 1978 occurred in 64 counties and population losses occurred in 24 counties. Eight SMSAs grew in population over the 1973-1978 period and 9 SMSAs had declines in population. Population of Ohio SMSA counties in 1978 was slightly less than in 1973, but non-SMSA counties added residents.

Personal Income by Source

Table 7, presenting Ohio personal income data by major sources, is not discussed here, but is included on page 8 as an example of information that is available for each Ohio county and SMSA.

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TABLE 7
PERSONAL INCOME BY MAJOR SOURCES, OHIO, 1973-1978
(Thousand Dollars)

Item	1973[a]	1974[a]	1975[b]	1976[b]	1977[b]	1978[b]
Total Labor and Proprietors' Income by Place of Work[c]						
By Type						
Wage and Salary Disbursements	37,800,062	40,678,937	41,587,668	46,147,763	51,186,076	57,058,485
Other Labor Income	2,896,238	3,257,825	3,716,486	4,381,511	5,141,672	5,870,060
Proprietors' Income[d]	3,352,296	3,318,512	3,465,214	3,714,859	4,090,369	4,394,843
Farm	589,949	689,801	681,499	623,209	589,434	551,329
Non-Farm[d]	2,762,347	2,628,711	2,783,715	3,091,650	3,500,935	3,843,514
By Industry						
Farm	712,772	828,284	856,863	824,862	775,722	788,753
Non-Farm	43,335,824	46,426,990	47,912,505	53,419,271	59,642,395	66,534,635
Private	37,779,461	40,488,585	41,494,181	46,453,223	52,205,235	58,476,247
Agricultural Serv., For., Fish., and Other[e]	90,671	98,879	97,575	109,001	132,876	153,051
Mining	311,670	405,824	483,051	572,350	620,121	688,024
Construction	2,489,136	2,576,494	2,577,191	2,799,663	3,126,081	3,623,202
Manufacturing	17,480,900	18,648,434	18,295,996	20,767,885	23,680,896	26,397,333
Non-Durable Goods	4,545,066	4,845,333	4,945,685	5,555,285	6,217,057	6,823,921
Durable Goods	12,935,834	13,803,101	13,350,311	15,212,600	17,463,839	19,573,412
Transportation and Public Utilities	3,111,637	3,266,428	3,319,674	3,764,513	4,243,884	4,797,290
Wholesale Trade	2,367,711	2,698,987	2,958,240	3,215,585	3,534,692	3,952,554
Retail Trade	4,397,247	4,709,955	4,942,682	5,393,172	5,865,916	6,424,355
Finance, Insurance, and Real Estate	1,754,617	1,831,526	1,941 183	2,212,662	2,532,067	2,865,872
Services	5,775,872	6,252,058	6,878,589	7,618,392	8,468,702	9,574,566
Government and Government Enterprises	5,556,363	5,938,405	6,418,324	6,966,048	7,437,160	8,058,388
Federal, Civilian	1,227,878	1,327,157	1,424,028	1,542,880	1,592,059	1,713,317
Federal, Military	231,123	246,787	265,826	254,566	256,076	271,793
State and Local	4,097,362	4,364,461	4,728,470	5,168,602	5,589,025	6,073,278
Derivation of Personal Income by Place of Residence						
Total Labor and Proprietors' Income by Place of Work	44,048,596	47,255,274	48,769,368	54,244,133	60,418,117	67,323,388
Less: Personal Contributions for Social Insurance by Place of Work	2,116,389	2,457,733	2,510,226	2,748,290	3,082,464	3,456,222
Net Labor and Proprietors Income by Place of Work	41,932,207	44,797,541	46,259,142	51,495,843	57,335,653	63,867,166
Plus: Residence Adjustment	—314,033	—323,175	—340,366	—372,572	—419,706	—453,147
Net Labor and Proprietors Income by Place of Residence	41,618,174	44,474,366	45,918,776	51,123,271	56,915,947	63,414,019
Plus: Dividends, Interest, and Rent[f]	6,443,435	7,284,178	7,630,084	8,376,642	9,332,333	10,500,806
Plus: Transfer Payments	5,552,390	6,621,949	8,405,714	9,039,046	9,719,831	10,540,772
Personal Income by Place of Residence	53,613,999	58,380,493	61,954,574	68,538,959	75,968,111	84,455,597
Total Population *(Thousands)*	10,745.3	10,745.4	10,735.3	10,690.0	10,696.2	10,748.7
Per Capita Personal Income *(Dollars)*	4,990	5,433	5,771	6,411	7,102	7,857

[a] Estimates based on 1967 SIC. [b] Estimates based on 1972 SIC.

[c] Consists of wage and salary disbursements, other labor income, and proprietors' income. Primary source for private non-farm wages: Covered Wages—Division of Research and Statistics, Ohio Bureau of Employment Services, Columbus.

[d] Includes the capital consumption adjustment for non-farm proprietors.

[e] Includes wages and salaries of U.S. residents working for international organizations in the U.S.

[f] Includes the capital consumption adjustment for rental income of persons.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Measurement Division.

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BULLETIN OF BUSINESS RESEARCH

STATISTICAL SUMMARY

Center for Business and Economic Research
The Ohio State University

Volume LV, Number 7 • July 1980

Business Conditions in Ohio and the United States

ITEM	OHIO: Unit or Index Base Period	OHIO: May 1980 (p)	OHIO: Apr. 1980 (r)	OHIO: Change From Last Month: May 1980 from Apr. 1980	OHIO: Change From Last Year: May 1980 from May 1979	OHIO: Change From Last Year: 5 months 1980 from 1979	UNITED STATES: Unit or Index Base Period	UNITED STATES: May 1980 (p)	UNITED STATES: Apr. 1980 (r)	UNITED STATES: Change From Last Month: May 1980 from Apr. 1980	UNITED STATES: Change From Last Year: May 1980 from May 1979	UNITED STATES: Change From Last Year: 5 months 1980 from 1979
GENERAL BUSINESS				%	%	%				%	%	%
• Bank Debits[5, 11]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	*Bil. $ Ex.NY[d, h]*	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Number[12]	*Number*	n.a.	n.a.	n.a.	n.a.	n.a.	*Number*	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Liabilities[12]	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	n.a.	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	n.a.
Life Insurance Sales[6]	*1967*	346	371	— 7	+ 5	+ 11	*1967*	383	394	— 3	+ 7	+ 13
INCOME												
• Total Personal Income[1, 13]	*Mil. Dol.[d, h]*	99,058	99,379	— x	+ 7	+ 9	*Bil. Dol.[d, h]*	2,070	2,067	+ x	+ 9	+ 10
Salaries & Wages Income[7, 13]	*Mil. Dol.[d, h]*	c	c	— 4	— 6	— 1	*Bil. Dol.[d, h]*	1,306	1,307	— x	+ 8	+ 9
Nonagricultural Income[13]		b	b	b	b	b	*Bil. Dol.[d, h]*	2,030	2,026	+ x	+ 10	+ 11
Employee Earn.—Gross Wkly.: Mfgr.[11, 13]	*Dollars*	336.04	337.34	— x	+ 3	+ 5	*Dollars*	280.53	278.95	+ 1	+ 6	+ 7
" " Const.[14, 15]	*Dollars*	449.07	432.98	+ 4	+ 3	+ 9	*Dollars*	357.19	351.86	+ 2	+ 5	+ 7
Agr. Income (Cash Mktgs.)[16, 17]	*1957–59*	n.a.	n.a.	n.a.	n.a.	n.a.	*1967*					
EMPLOYMENT & UNEMPLOYMENT												
Civilian Labor Force[14, 15]	*Thousands*	5,035	4,957	+ 2	+ 1	— x	*Thousands*	104,028	103,412	+ 1	+ 3	+ 2
Civilian Employment[14, 15]	*Thousands*	4,596	4,595	+ x	— 3	— 2	*Thousands*	96,709	96,566	+ x	+ 1	+ 1
Nonagricultural Employment[14, 15]	*Thousands*	4,433	4,445	— x	— 2	— x	*Thousands*	93,273	93,485	— x	+ x	+ 1
Mfg. Prod. Employment[7, 15]	*1967*	68	72	— 5	— 17	— 11	*1967*	99	101	— 1	— 5	— 2
• Mfg. Prod. Payrolls[7, 15]	*1967*	157	168	— 7	— 15	— 9	*1967*	242	245	— 1	— 1	+ 3
Average Weekly Hours—Mfg. Prod.[7, 15]	*Number*	40.1	40.4	— 1	— 4	— 2	*Number*	39.4	39.4	+ x	— 2	— 1
Unemployment, Total—No.[14, 15]	*Thousands*	439	363	+ 21	+ 78	+ 23	*Thousands*	7,318	6,846	+ 7	+ 39	+ 17
Unemployment, Total—Rate[14, 15]	*Percent*	8.7	7.3				*Percent*	7.0	6.6			
Unemployment, Insured[14, 15]	*Thousands*	212	193	+ 10	+120	+ 67	*Thousands*	3,683	3,629	+ 1	+ 65	+ 30
Registered for Work, O.B.E.S.[14]	*Thousands*	383	384	— x	+ 14	+ 14		b	b	b	b	b
Unemployment Compensation Fund[14]	*Mil. Dol.*	325	247	+ 31	— 42	— 22		b	b	b	b	b
PRODUCTION												
Gross National Product (Quarterly)[13]		b	b	b	b	b	*Bil. Dol.[d, h]*	n.a.	n.a.	n.a.	n.a.	n.a.
Industrial Production[7, 11]	*1967*	c	c	— 7	— 20	— 14	*1967[d]*	146	149	— 2	— 5	— 1
• Steel Production[18]	*Thous. Tons*	1,371	1,596	— 14	— 34	— 19	*Thous. Tons*	226	10,658	— 13	— 28	— 12
Electric Power Production[8]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	*Mil. KWH*	n.a.	n.a.	n.a.	n.a.	n.a.
Bituminous Coal Production[19]	*Thous. Tons*	4,320	4,197	+ 3	+ 19	+ 3	*Thous. Tons*	n.a.	73,135	n.a.	n.a.	n.a.
Pig Iron Production[18]	*Thous. Tons*	939	1,065	— 12	— 32	— 18	*Thous. Tons*	5,906	6,677	— 12	— 29	— 13
Machine Tools—Shipments[20]		b	b	b	b	b	*Mil. Dol.*	n.a.	344.00	n.a.	n.a.	n.a.
Machine Tools—New Orders[20]		b	b	b	b	b	*Mil. Dol.*	n.a.	414.95	n.a.	n.a.	n.a.
Durable Goods—New Orders[13]		b	b	b	b	b	*Mil. Dol.[d]*	67,428	72,218	— 7	— 2	— 4
CONSTRUCTION (Value of Contracts)												
• Total (Seas. Adj.)[9, 21]	*1967[d]*						*1967[d]*					
Total[9, 21]	*1967[f]*	147	160	— 8	— 43	— 24	*Mil. Dol.*	11,135	11,071	+ 1	— 31	— 26
Residential Building[9, 21]	*1967[f]*	142	133	+ 7	— 56	— 44	*Mil. Dol.*	4,495	4,373	+ 3	— 44	— 31
Nonresidential Building[9, 21]	*1967[f]*	129	136	— 5	— 36	— 5	*Mil. Dol.*	4,135	4,063	+ 2	— 7	— x
Utilities and Non-Building Const.[9, 21]	*1967[f]*	204	284	— 28	— 20	— 15	*Mil. Dol.*	2,505	2,635	— 5	— 33	— 44
DISTRIBUTION												
Total Retail Sales[2, 13]	*1957–59[d]*	287	289	— 1	— 3	+ 1	*Mil. Dol.[d]*	74,265	75,011	— 1	+ 3	+ 7
Department Store Sales[2, 13]	*1957–59[d]*	258	272	— 5	+ 6	+ 3	*Mil. Dol.[d]*	7,727	7,468	+ 3	+ 6	+ 9
• New Passenger Cars Registered[3, 22]	*1967*	83	96	— 13	— 43	— 22	*No.–49 sts.*	733,229	783,741	— 6	— 26	— 14
New Trucks Registered[3, 22]	*No.–44 cos.*	3,734	4,562	— 18	— 49	— 42	*No.–48 sts.*	206,868	220,595	— 6	— 35	— 27
Used Cars Registered[3]	*No.–33 cos.*	31,501	33,070	— 5	— 30	— 11		b	b	b	b	b
PRICES												
• Consumer Price Index[15]:												
All Urban Consumers		b	b	b	b	b	*1967*	245	243	+ 1	+ 14	+ 14
Wage Earners & Clerical Workers		b	b	b	b	b	*1967*	245	243	+ 1	+ 14	+ 14
Producer Price Index[15]:												
All Commodities		b	b	b	b	b	*1967*	264	262	+ 1	+ 14	+ 15
Finished Goods		b	b	b	b	b	*1967*	241	240	+ x	+ 13	+ 13
Intermediate Materials		b	b	b	b	b	*1967*	276	275	+ x	+ 16	+ 17
Crude Materials		b	b	b	b	b	*1967*	301	297	+ 1	+ 7	+ 10
Sensitive Indus. Commodities[15]		b	b	b	b	b	*1967*	279	302	— 8	— 5	+ 9
BANKING AND FINANCE												
• Bank Loans, Large Banks—Total[11]	*Mil. Dol.*	25,168	25,803	— 2	+ 20	+ 20	*Mil. Dol.*	404,287	411,475	— 2	+ 9	+ 13
" " " " Buc. & Agric.[11]	*Mil. Dol.*	9,127	9,378	— 3	+ 15	+ 19	*Mil. Dol.*	161,940	166,147	— 3	+ 10	+ 15
Stock Price Index—400 Indust.[23]		b	b	b	b	b	*1941–43 = 10*	121.0	113.7	+ 6	+ 10	+ 9
" " " 40 Utils.[23]		b	b	b	b	b	*1941–43 = 10*	50.1	48.5	+ 3	+ 4	— 3
" " " 20 Trans.[23]		b	b	b	b	b	*1970 = 10*	15.2	14.6	+ 4	+ 10	+ 14
Yield, Corp. AAA Bonds[23]		b	b	b	b	b	*Percent*	10.78	11.09	— 3	+ 14	+ 25

• Indicates series charted (page S-1). For sources and footnotes, see page S-3.

Business Conditions in the 8 Largest OHIO CITIES

ITEM	Unit or Index Base Period	May 1980	Apr. 1980	CHANGE FROM LAST YEAR		May 1980	Apr. 1980	CHANGE FROM LAST YEAR		May 1980	Apr. 1980	CHANGE FROM LAST YEAR		May 1980	Apr. 1980	CHANGE FROM LAST YEAR	
		(p)	(r)	May 1980 from May 1979	5 months 1980 from 1979	(p)	(r)	May 1980 from May 1979	5 months 1980 from 1979	(p)	(r)	May 1980 from May 1979	5 months 1980 from 1979	(p)	(r)	May 1980 from May 1979	5 months 1980 from 1979
		AKRON				CANTON				CINCINNATI				CLEVELAND			
				%	%			%	%			%	%			%	%
Number Employed[7]:																	
Total[w]	1967	79	79	— 6	— 5	92	95	— 6	— 4	87	86	— 9	— 7	84	86	— 10	— 6
Manufacturing	"	56	57	— 12	— 11	83	87	— 9	— 7	62	64	— 18	— 17	60	66	— 23	— 14
Trade, Serv., & Utils.	"	109	109	— 1	— x	109	109	— 2	+ x	113	109	— 2	+ 2	109	108	— x	+ x
Construction	"	50	50	— 28	— 12	75	77	— 8	— 9	67	69	— 26	— 12	64	69	— 15	— 4
Payrolls[7]:																	
Total[w]	"	173	172	+ 1	+ 2	228	236	— 4	+ 1	214	215	— 8	— 6	186	197	— 12	— 4
• Manufacturing	"	128	126	— 1	— 3	202	210	— 7	— 3	151	156	— 18	— 18	125	143	— 30	— 18
Trade, Serv., & Utils.	"	264	267	+ 5	+ 7	302	308	+ 1	+ 5	301	297	+ 2	+ 5	268	271	+ 5	+ 8
Construction	"	122	111	— 22	— 5	172	184	— 5	+ 8	172	174	— 27	— 5	173	179	— 13	+ 5
Emp. Earn.—Gross Wkly.[7]:																	
All Industries[w]	$	332.73	329.13	+ 9	+ 8	318.75	321.63	+ 1	+ 3	284.21	289.61	+ 2	+ 2	344.78	354.54	— 1	+ 2
Manufacturing	"	390.64	382.06	+ 12	+ 9	351.71	352.69	+ 1	+ 2	334.50	335.22	+ 2	+ 1	359.07	374.90	— 7	— 3
Trade, Serv., & Utils.	"	249.03	255.23	+ 5	+ 7	252.24	256.46	+ 1	+ 4	216.91	227.98	+ 2	+ 1	315.13	321.92	+ 6	+ 8
Construction	"	467.78	422.11	+ 9	+ 8	432.87	450.14	— 5	+ 8	450.72	446.24	— 1	+ 8	493.28	472.30	+ 2	+ 9
Retail Sales[2]	%	c	c	+ x	+ 1	c	c	— 2	+ 1	c	c	+ 2	+ 2	c	c	— 6	— 4
Auto Titles[3]:																	
New Cars	No.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3,690	4,221	— 39	— 20	6,046	6,748	— 44	— 25
New Trucks	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	562	636	— 40	— 40	661	671	— 37	— 36
Retail Food Prices[15]	1967	b	b	b	b	b	b	b	b	265	262	+ 6	+ 6	249	250	+ 3	+ 5
Bank Debits[5]	1967[f]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	No.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	Thous. $	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	1967[f]	130	140	— 15	— 8	b	b	b	b	b	b	b	b	b	b	b	b
Value of Bldg. Const.[9]:																	
Total	"	121	161	— 55	— 34	230	182	+ 4	— 13	198	71	+ 45	— 30	38	87	— 71	— 1
Residential	"	162	138	— 43	— 30	78	197	— 77	— 40	214	44	+ x	— 46	39	45	— 72	— 40
Nonresidential	"	79	184	— 69	— 38	416	163	+458	+ 21	182	95	+177	— 16	37	125	— 70	+ 25
Steel Production[18]	1967[g]	b	b	b	b	b	b	b	b	94	107	— 20	— 10	106	124	— 26	— 11
Labor Force Estimates[11]:																	
Civilian Labor Force	Thous.	241.5	237.0	+ 1	— x	173.4	170.6	+ 3	+ 2	421.3	416.6	— 1	— 2	734.5	727.4	— 1	— 2
Civilian Employment	"	222.6	220.2	— 2	— 1	159.0	158.2	— 1	+ x	392.2	390.4	— 4	— 3	678.3	682.1	— 5	— 3
Unemp. Total—No.	"	19.5	16.8	+ 48	+ 16	14.4	12.4	+ 82	+ 26	29.1	26.2	+ 52	+ 9	56.2	45.3	+ 71	+ 19
Unemp., Total—Rate	%	8.1	7.1			8.3	7.3			6.9	6.3			7.7	6.2		
		COLUMBUS				DAYTON				TOLEDO				YOUNGSTOWN			
				%	%			%	%			%	%			%	%
Number Employed[7]:																	
Total[w]	1967	97	98	— 8	— 4	99	104	— 8	— 3	86	91	— 18	— 11	80	81	— 5	— 5
Manufacturing	"	59	63	— 20	— 12	58	66	— 21	— 11	49	61	— 46	— 30	49	51	— 14	— 12
Trade, Serv., & Utils.	"	123	123	— 3	— 2	160	160	+ x	+ 2	121	121	+ x	+ 1	119	120	— 2	— x
Construction	"	67	68	— 9	+ 7	89	84	— 8	+ 1	83	73	+ 1	+ 13	52	50	+ 23	— 2
Payrolls[7]:																	
Total[w]	"	229	231	— 3	+ 2	194	206	— 11	— x	204	217	— 15	— 9	184	185	+ 3	+ 1
• Manufacturing	"	127	135	— 20	— 10	123	143	— 27	— 9	110	135	— 44	— 31	126	131	— 7	— 7
Trade, Serv., & Utils.	"	325	324	+ 4	+ 6	346	346	+ 8	+ 9	331	336	+ 8	+ 9	300	296	+ 9	+ 9
Construction	"	167	159	+ 1	+ 20	215	203	— 8	+ 11	207	171	+ 2	+ 20	139	132	+ 36	+ 3
Emp. Earn.—Gross Wkly.[7]:																	
All Industries[w]	$	282.06	280.62	+ 5	+ 7	344.98	349.51	— 3	+ 3	344.23	343.09	+ 8	+ 6	321.05	317.61	+ 8	+ 6
Manufacturing	"	335.33	336.41	+ 2	+ 5	372.12	380.43	— 9	+ 1	382.08	377.16	+ 5	+ 1	365.45	362.69	+ 7	+ 4
Trade, Serv., & Utils.	"	235.03	234.04	+ 7	+ 7	295.10	294.88	+ 8	+ 7	292.42	297.88	+ 14	+ 12	249.30	244.55	+ 11	+ 9
Construction	"	398.40	380.35	+ 7	+ 12	433.75	432.73	— x	+ 10	486.23	458.77	— 1	+ 5	457.54	457.75	+ 5	+ 2
Retail Sales[2]	%	c	c	— 11	— 4	c	c	— 3	— 2	c	c	— 6	— 4	c	c	— 9	— 4
Auto Titles[3]:																	
New Cars	No.	3,551	4,062	— 38	— 19	2,013	2,540	— 42	— 20	n.a.	n.a.	n.a.	n.a.	987	1,181	— 44	— 27
New Trucks	"	758	877	— 30	— 23	275	319	— 52	— 53	n.a.	n.a.	n.a.	n.a.	111	283	— 68	— 34
Retail Food Prices[15]	1967	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
Bank Debits[5]	1967[f]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	No.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	Thous. $	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	1967[f]	b	b	b	b	b	b	b	b	128	135	— 21	— 12	71	75	— 20	— 13
Value of Bldg. Const.[9]:																	
Total	"	114	99	— 75	— 34	107	198	— 48	+ 19	76	156	— 58	— 38	114	208	— 59	— 27
Residential	"	120	146	— 54	— 33	48	166	— 79	— 52	180	185	— 33	— 46	74	207	— 72	— 56
Nonresidential	"	108	52	— 83	— 34	180	238	— x	+ 90	21	140	— 84	— 29	162	208	— 45	+ 8
Steel Production[18]	1967[g]	b	b	b	b	b	b	b	b	b	b	b	b	54	71	— 41	— 25
Labor Force Estimates[11]:																	
Civilian Labor Force	Thous.	429.8	423.4	— x	— 1	269.2	266.3	— 1	— 1	221.0	218.8	— x	— 2	129.3	128.8	— 1	— 2
Civilian Employment	"	405.7	403.4	— 2	— 1	246.3	247.3	— 3	— 2	195.3	195.8	— 7	— 3	114.1	115.7	— 7	— 4
Unemp. Total—No.	"	24.2	20.0	+ 32	— 7	22.9	19.1	+ 36	+ 18	25.7	23.0	+106	+ 40	15.2	13.0	+ 87	+ 31
Unemp., Total—Rate	%	5.6	4.7			8.5	7.2			11.6	10.5			11.7	10.1		

NOTE: All data are for county areas except bank debits and commercial failures, which are for areas within city limits. The indexes of number employed and payrolls and the employee weekly earnings are based on data for production workers in manufacturing, construction workers in contract construction, and nonsupervisory employees in other categories which exclude agriculture, government, education, and public institutions.

• Indicates series charted (page S-3). For sources and footnotes, see page S-3.

Number Employed, Payrolls, and Man-Hours in Ohio Industry

INDUSTRIAL GROUP	NUMBER EMPLOYED[7]					PAYROLLS[7]					MAN-HOURS[7]				
	Index (1967 = 100)		Change			Index (1967 = 100)		Change			Index (1967 = 100)		Change		
	May 1980 (p)	Apr. 1980 (r)	May 1980 from Apr. 1980	May 1980 from May 1979	5 months 1980 from 1979	May 1980 (r)	Apr. 1980 (p)	May 1980 from Apr. 1980	May 1980 from May 1979	5 months 1980 from 1979	May 1980 (p)	Apr. 1980 (r)	May 1980 from Apr. 1980	May 1980 from May 1979	5 months 1980 from 1979
			%	%	%			%	%	%			%	%	%
Total[w] (2,350)[a]	**83**	**85**	**— 2**	**— 9**	**— 6**	**187**	**193**	**— 3**	**— 6**	**— 1**	**79**	**81**	**— 3**	**— 11**	**— 7**
All Manufacturing[w] (1,276)	**68**	**72**	**— 5**	**— 17**	**— 11**	**157**	**168**	**— 7**	**— 15**	**— 9**	**62**	**66**	**— 7**	**— 20**	**— 14**
Chemicals (67)	96	97	— 1	— 1	— 8	211	208	+ 1	+ 1	— 11	89	89	— x	— 5	— 13
Food Products (87)	78	77	+ 2	+ 2	— 2	194	188	+ 3	+ 12	+ 8	69	67	+ 3	+ 2	— 2
Bakery	76	70	+ 8	— 1	— 1	188	168	+ 12	+ 12	+ 9	74	66	+ 12	+ 2	+ x
Miscellaneous	78	77	+ 1	+ 3	— 2	194	190	+ 2	+ 12	+ 8	67	66	+ 1	+ 2	— 2
Lumber Products (43)	84	89	— 6	— 16	— 13	176	189	— 7	— 6	— 2	74	82	— 9	— 16	— 12
Furniture	94	99	— 6	— 15	— 13	195	212	— 8	— 4	— 1	87	97	— 11	— 15	— 11
Miscellaneous	67	71	— 5	— 20	— 14	147	151	— 3	— 10	— 6	56	59	— 4	— 19	— 14
Machinery (295)	67	71	— 5	— 12	— 5	150	157	— 5	— 6	+ 2	63	67	— 5	— 14	— 6
Elec. Mach., Apparatus and Supplies	73	77	— 5	— 12	— 4	170	179	— 5	— 7	+ 4	68	72	— 5	— 14	— 4
Machine Tools	62	65	— 5	— 2	+ x	143	149	— 4	+ 5	+ 10	62	66	— 6	— 3	+ x
Agricultural Equipment	32	37	— 14	— 39	— 19	76	89	— 15	— 37	— 10	35	41	— 14	— 44	— 20
Special Machinery and Appliances	64	67	— 4	— 13	— 8	133	139	— 4	— 8	— 2	59	62	— 5	— 16	— 10
Metal Products (348)	72	81	— 11	— 20	— 12	164	192	— 14	— 20	— 10	62	73	— 14	— 25	— 16
Foundry Products and Drop Forgings	67	92	— 27	— 37	— 18	152	230	— 34	— 40	— 21	52	74	— 30	— 42	— 23
Pipes, Valves, and Plumbers' Supplies	48	69	— 30	— 46	— 21	115	183	— 37	— 41	— 15	51	77	— 35	— 44	— 22
Screw Machine Products and Hdwe.	75	88	— 15	— 25	— 13	135	162	— 16	— 29	— 14	68	82	— 16	— 33	— 19
Sheet Metal Work	77	80	— 4	— 23	— 19	169	182	— 7	— 25	— 16	63	67	— 6	— 28	— 20
Steel Works and Rolling Mills	75	77	— 3	— 7	— 5	167	184	— 9	— 6	— 3	65	72	— 10	— 14	— 11
Stoves and Furnaces	65	76	— 15	— 42	— 28	131	156	— 16	— 40	— 21	68	79	— 15	— 42	— 27
Miscellaneous	68	78	— 13	— 22	— 12	155	181	— 14	— 20	— 7	58	67	— 14	— 24	— 13
Paper and Printing (135)	61	62	— 2	— 7	— 5	154	162	— 5	— 3	+ 1	56	58	— 4	— 11	— 8
Paper and Pulp	44	43	+ 2	— 8	— 3	147	163	— 10	— 2	+ 6	37	38	— 4	— 11	— 4
Printing and Publishing	74	75	— 1	— 6	— 5	170	170	— x	— 2	— 1	68	68	— 1	— 7	— 6
Miscellaneous	61	64	— 4	— 8	— 6	146	153	— 5	— 3	+ x	59	62	— 5	— 12	— 9
Rubber Products (52)	56	61	— 8	— 22	— 15	132	148	— 10	— 25	— 14	49	55	— 11	— 28	— 19
Tires and Tubes	47	47	— 1	— 11	— 9	101	103	— 2	— 10	— 9	33	35	— 3	— 17	— 15
Miscellaneous	61	69	— 12	— 27	— 17	154	181	— 15	— 33	— 16	61	71	— 14	— 33	— 21
Stone, Clay, and Glass Products (93)	69	72	— 3	— 8	— 5	177	178	— 1	— 1	+ x	75	77	— 2	— 9	— 7
Brick and Tile	51	52	— 1	— 16	— 13	106	109	— 3	— 12	— 8	51	52	— 3	— 17	— 15
Glass	76	77	— 2	— 5	— 4	178	178	+ x	+ 1	+ 1	77	77	— x	— 4	— 4
Vitreous & Semi-Vit. China & Pottery	51	53	— 5	— 11	— 4	158	163	— 3	+ 2	+ 7	78	81	— 4	— 12	— 4
Miscellaneous	79	83	— 4	— 10	— 5	209	207	+ 1	— 7	— 2	80	83	— 3	— 16	— 10
Textiles (37)	69	69	— x	— 11	— 8	102	106	— 4	— 11	— 6	64	67	— 4	— 16	— 11
Men's Clothing	82	82	— 1	— 4	— 4	110	114	— 3	— 3	— 5	72	74	— 4	— 10	— 11
Miscellaneous	61	61	+ 1	— 15	— 11	99	103	— 4	— 17	— 7	60	62	— 4	— 20	— 11
Vehicles (62)	56	57	— 3	— 41	— 33	135	140	— 4	— 44	— 36	48	50	— 4	— 46	— 38
Autos and Parts	56	58	— 3	— 48	— 39	141	148	— 5	— 51	— 43	48	50	— 4	— 53	— 45
Cars, Electric and Steam Railway	95	99	— 4	— 9	— 5	223	221	+ 1	— 3	— 1	86	86	+ x	— 12	— 8
Miscellaneous	60	61	— 2	+ 20	+ 23	138	140	— 2	+ 33	+ 36	59	60	— 3	+ 17	+ 21
Miscellaneous Manufacturing (57)	59	62	— 4	— 12	— 8	137	144	— 5	— x	+ 4	55	59	— 6	— 12	— 7
Total Trade, Service, and Utilities[w] (702)	**102**	**102**	**+ x**	**— 2**	**— x**	**238**	**237**	**+ x**	**+ 5**	**+ 7**	**104**	**104**	**+ x**	**— 2**	**— x**
Service (209)	126	125	+ 1	+ 2	+ 3	265	263	+ 1	+ 10	+ 11	137	136	+ 1	+ 3	+ 4
Trade, Retail and Wholesale (385)	87	87	— x	— 5	— 3	203	202	+ 1	+ 1	+ 3	86	86	+ x	— 5	— 3
Transportation & Public Utilities (108)	108	108	+ x	— x	+ 1	296	297	— x	+ 7	+ 9	106	107	— x	— 2	— x
Construction (344)	**65**	**63**	**+ 3**	**— 11**	**— 1**	**169**	**160**	**+ 6**	**— 5**	**+ 12**	**59**	**58**	**+ 3**	**— 12**	**+ 4**
Mines and Quarries (28)	**127**	**121**	**+ 6**	**+ x**	**— 2**	**291**	**290**	**+ x**	**+ 10**	**+ 9**	**79**	**77**	**+ 1**	**+ x**	**— 1**

Indexes of number employed and of payrolls are based on the employment of 457,933 persons (production workers in manufacturing and mining, construction workers in contract construction, and nonsupervisory employees in other categories) in 2,350 firms; indexes of man-hours, on the employment of 443,307 production workers and nonsupervisory employees in 2,246 firms. Figures in parentheses show number of firms reporting employment and payrolls. In some cases fewer firms report man-hours. Data do not include agriculture, government, education, or public institutions. For sources and footnotes, see below.

FOOTNOTES FOR BULLETIN TABLES AND CHARTS

†Change in number of failures: [a]Figures in parentheses show number of firms reporting this month: [n.a.]Current data not available: [b]Comparable data not available: [c]Only percentage of change available: [d]Adjusted for seasonal change; [f]Adjusted for number of working days; [g]Four weeks average; [h]Annual rate; [p]Preliminary; [r]Revised: [s]Series revised: [w]Weighted: [x]Less than 0.5 percent; [y]More than 1.000 percent increase.

Primary Sources:

Computed from: [1]Center for Business and Economic Research multiple regression model.

Computed from original data collected by the Center for Business and Economic Research from: [2]Ohio retailers: [3]County Clerks of Courts: [4]Local Power and Light Companies.

Computed by the Center for Business and Economic Research from data supplied by: [5]Board of Governors of the Federal Reserve System: [6]Life Insurance Marketing and Research Association; [7]Division of Research and Statistics of the Ohio Bureau of Employment Services, collected in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor; [8]Federal Power Commission; [9]F. W. Dodge Division, McGraw-Hill Information Systems Company; [10]Dun & Bradstreet, Inc.

Other data sources: [11]Federal Reserve Board: [12]Dun & Bradstreet, Inc.; [13]U.S. Department of Commerce: [14]Division of Research and Statistics of the Ohio Bureau of Employment Services: [15]U.S. Department of Labor; [16]Department of Agricultural Economics, O.S.U.; [17]U.S. Department of Agriculture; [18]American Iron and Steel Institute; [19]U.S. Department of Energy; [20]National Machine Tool Builders' Association; [21]F. W. Dodge Division, McGraw-Hill Information Systems Company; [22]R. L. Polk & Co.; [23]Standard & Poor's Corporation.

Note: In the Ohio-U.S. table, page S-2, dual source notes on a single line of the table stub refer first to Ohio data, second to U.S. data.

Ohio Retail Sales Trends

May Sales of Ohio Retailers were up 4 percent from April sales, but on a seasonally adjusted basis the May sales index showed a 1 percent decline from the April index. Compared with sales in year-ago May, sales in the current month were down 3 percent.

For the First Five Months of 1980, cumulative sales were only 1 percent higher than sales during the first 5 months of 1979.

By Kind of Business, current declines from last year again were dominated by the drops in sales by motor vehicle dealers—down 33 percent from May 1979 and down 20 percent from the 5-month period in 1979. To illustrate the effect of the drop-off in car sales, motor vehicle sales were factored out of the total sales index for the first 5 months of 1980 and the first 5 months of 1979. The resulting comparison of "total sales *excluding* motor vehicles" in May 1980 and May 1979 provides a percent increase of 4 percent—as contrasted with the 3 percent decline in total sales *including* motor vehicles—and for the first 5 months of 1980 and 1979 yields a 6 percent increase in the current year-to-date—compared to the 1 percent year-to-date increase in the total with vehicles included.

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INDEXES OF OHIO RETAIL SALES

KIND OF BUSINESS	INDEX (1957-59 = 100)		CHANGE			
			May 1980 from Apr. 1980		May 1980 from May 1979	5 months 1980 from 1979
	May 1980 (p)	Apr. 1980 (r)	Not Seas. Adj.	Seas. Adj.		
			%	%	%	%
Total Retail Stores[2, w]	**297**	**285**	**+ 4**	**— 1**	**— 3**	**+ 1**
Grocery Stores	346	322	+ 8	+ 5	+12	+11
Other Food Stores	414	340	+22	+17	+14	+14
General Stores (With Food)	184	188	— 2	— 9	+13	+31
Department Stores	241	246	— 2	— 5	+ 6	+ 4
Other General Merchandise	275	233	+18	+11	+20	+16
Men's Clothin-Furns. Strs.	123	111	+11	+ 2	+ 8	+ 2
Family Clothing Stores	155	160	— 3	— 5	+ 5	+10
Women's Ready-to-Wear Strs.	135	117	+16	+18	+15	— x
Shoe Stores	108	109	— 1	— 4	+ 4	+ x
Furniture Stores	211	203	+ 4	— 7	— 8	+ 1
Household Appl.-TV-Rdio Strs.	165	153	+ 8	— x	—11	— 2
Home Furnishings Stores	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Motor Vehicle Dealers	291	298	— 3	— 5	—33	—20
Other Automotive	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Filling Stations	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Lumber-Bldg. Matls. Dealers	244	231	+ 6	— 8	—24	—11
Paint, Glass & Wallpaper Strs.	208	206	+ 1	—11	+ 3	+17
Heat.-Plumb. & Elec. Sup. Strs.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hardware Stores	287	257	+11	— 1	+ 3	+ 3
Farm Equipment Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Eating & Drinking Places	220	202	+ 9	+ 4	+ 1	+ 2
Drug Stores	299	344	—13	—16	+16	+17
Jewelry Stores	181	145	+25	— x	— 2	+ 8
Florists	285	238	+20	— 1	— x	— 3
Fuel Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hay-Feed, Farm & Grdn. Strs.	736	736	+ x	— 2	+17	+11
State Liquor Stores	178	154	+15	+13	+ 9	+ 6

For sources and footnotes, see page S-3.

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By ROBERT R. EBERT

Chrysler, Automotive Scale Economies, and the Ohio Economy

The article presented here hypothesizes that the survival of Chrysler Corporation as an important component of the Ohio economy is dependent on its ability to exploit both plant-specific scale economies (i.e., satisfactory annual rates of production) and product-specific scale economies (i.e., satisfactory volumes of output for each of its models to minimize model changeover costs).

No attempt is made to explain the details of Chrysler's financial arrangements or the $1.5 billion in Federal Government guaranteed loans. There are other sources for that information.[1]

Before authorizing the granting of the loan guarantees federal officials stated that Chrysler's survival strategy could be disrupted if the automobile industry slump continues. The risks of failure still are considered significant.[2] Therefore, in addition to discussing implications of and conditions necessary for Chrysler's survival, the potential impact of its failure on the Ohio economy must be considered.

Chrysler in Ohio

Chrysler is a major component of the motor vehicle and equipment industry in Ohio (Standard Industrial Classification code, S.I.C., 371). (See Tables 1 and 2.) In 1979, the firm employed an average of 9,406 people in its manufacturing plants. In 1977, Chrysler accounted for

(Continued on page 2)

TABLE 1
CHRYSLER AND OHIO MANUFACTURING EMPLOYMENT DATA

	Employees				Establishments			
	Chrysler			Ohio Total	Chrysler			Ohio
Category	1979	1978	1977	1977	1979	1978	1977	1977
All Manufacturing (No.)	9,406	11,195	11,343	1,342,783	7	7	7	16,322
Motor Vehicle and Equipment Manufacturing (S.I.C. 371)	9,406	11,195	11,343	121,909	7	7	7	263
Payrolls: (Million $)				246	302	281		2,451
Suppliers in Ohio (No.)	....	....	....	....	n.a.	2,451	2,343	..
Supplier Employment (No.)—est.	n.a.	40,467	32,000	....	....	....	....	....
Purchases from Suppliers (Million $)	....	....	....	.... n.a.	1,362	1,089		..
Automotive Dealerships—(S.I.C. 551) (No.)	n.a.	10,036	6,191	37,439	n.a.	260	262	873

n.a. Not available.

Sources: U.S. Congress, House, Subcommittee on Economic Stabilization of the Committee on Banking, Finance, and Urban Affairs, *Findings of the Chrysler Corporation Loan Guarantee Board*, 96th Congress, 2d. Session, Committee Print 96-13, May 12, 1980, pp. 148-149.

Chrysler Corporation, "Chrysler Facilities in Ohio, 1977, 1978, 1979," News Relations Department (Mimeographed).

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Also In This Issue

Statistical Summary .... *pages* **S-1** *through* **S-4**
- **Business Conditions in Ohio and the United States** .... *page* **S-1**
- **Business Conditions in the 8 Largest Ohio Cities** .... *page* **S-2**
- **Number Employed, Payrolls, and Man-Hours in Ohio Industry** .... *page* **S-3**
- **Ohio Retail Sales Trends** .... *page* **S-4**

Chrysler and the Ohio Economy

(Continued from page 1)

about 9 percent of S.I.C. employment in Ohio. In addition, Chrysler dealers employ about 10,000 persons and its suppliers another 40,000 in Ohio.

TABLE 2
CHRYSLER MANUFACTURING FACILITIES IN OHIO

City	County[a]	Type of Facility	Chrysler Employment May 1979
Dayton	Montgomery	Heaters and Air Conditioners	1,926
Fostoria (Closed in April 1980)	Hancock, Seneca, Wood	Foundry	652
Sandusky	Erie	Vinyl Products	344
Toledo	Lucas	Machining on Power Train Components	2,389
Twinsburg (Akron)	Summit	Stamping	3,748
Lima	Allen	Military Tanks	347
Van Wert	Van Wert	Powdered Metal, Magnet and Cold Extrusion Products	n.a.
		Total Ohio	9,406

[a] County is location of the major city of the area where the plant is located.

Source: U.S. Congress, House, Subcommittee on Economic Stabilization of the Committee on Banking, Finance, and Urban Affairs, *Findings of the Chrysler Corporation Loan Guarantee Board*, 96th Congress, 2d. Session, Committee Print 96-13, May 12, 1980, p. 148.

The localized impact of Chrysler operations on communities in Ohio is particularly important. Table 3 contains data on Chrysler employment as a percentage of both area labor force (Standard Metropolitan Statistical Area where applicable) and area manufacturing employment. In both categories a relatively large amount of local employment is accounted for by Chrysler facilities.

TABLE 3
CHRYSLER EMPLOYMENT IN OHIO: PERCENT OF LABOR FORCE, MAY 1979

Facility	Chrysler Employment	Area Labor Force	Chrysler Percent of Area Labor Force	Area Mfg. Employment	Chrysler as Percent of Area Mfg. Employment
		(Thousands)		*(Thousands)*	
Dayton	1,926	386.9	0.5%	109.9	1.8%
Fostoria	652	107.6	0.6	n.a.	....
Sandusky	344	39.7	0.9	n.a.	..
Toledo	2,389	367.4	0.7	91.5	2.6
Twinsburg	3,748	299.9	1.2	273.0	1.4
Lima	347	102.0	0.3	n.a.	....
Van Wert	n.a.	n.a.	n.a.	n.a.	....

n.a. Not available.

Source: U.S. Congress, House, Subcommittee on Economic Stabilization of the Committee on Banking, Finance, and Urban Affairs, *Findings of the Chrysler Corporation Loan Guarantee Board*, 96th Congress, 2d. Session, Committee Print 96-13, May 12, 1980, p. 148.

Table 4 describes recent reductions in Chrysler motor vehicle output and employment. Since January 1980, output and employment levels have fallen still further at Chrysler to a level of about 50 percent of potential. In addition, with a "rule-of-thumb" multiplier of about two on employment, for each Chrysler job lost directly there is a loss of one additional job through indirect effects on suppliers.[3]

TABLE 4
CHRYSLER EMPLOYMENT IN OHIO: CHANGES AS A RESULT OF AUTO INDUSTRY RECESSION

Facility	Chrysler Employment[a]			May-Jan.
	May 1979	Sept. 1979	Jan. 1980	Changes
Dayton	1,926	1,491	1,207	— 719
Fostoria	652	505	371	— 281
Sandusky	344	232	250	— 94
Toledo	2,389	1,870	1,396	— 993
Twinsburg	3,748	3,532	2,777	— 971
Lima	347	320	278	— 69
Van Wert	n.a.	n.a.	n.a.	n.a.
Total	9,406	7,950	6,279	—3,127
(Note: Chrysler Car & Truck Production:)[b]	155,766	85,891	107,323	....

[a] U.S. Congress, House, Subcommittee on Economic Stabilization of the Committee on Banking, Finance, and Urban Affairs, *Findings of the Chrysler Corporation Loan Guarantee Board*, 96th Congress, 2d. Session, Committee Print 96-13, May 12, 1980, p. 148.

[b] *Automotive News, Market Data Book*, 1979 (Detroit: Crain Publications, April 30, 1980), pp. 24 and 45, and "U.S. Car and Truck Production," *Automotive News*, February 11, 1980, p. 192.

Urban areas such as Toledo, Dayton, and Akron/Cleveland where Chrysler has major production facilities would have particular unemployment problems in the event of a complete Chrysler shutdown. These problems might include reduced tax bases, increased social unrest, and racial tensions plus increased transfer payments to a larger pool of unemployed workers.

The only Chrysler manufacturing facility to be closed in Ohio thus far is the Fostoria foundry, closed in April 1980. At the time of its closing the plant employed 375 (300 hourly and 75 salaried personnel).[4] The Fostoria employment, therefore, had already dropped significantly from the May 1979 levels (see Table 4).

The impact of Chrysler plant closings would be dependent on two things: (1) how quickly laidoff workers would be absorbed into other firms and (2) the probability of Chrysler's closed facilities being purchased and operated by other businesses, especially automotive firms.

In the event of permanent closings some laidoff Chrysler workers would find employment in plants of other motor vehicle manufacturers or suppliers in Ohio. The extent to which such an absorption of workers would occur is dependent on the strength of the automobile market in future years. With 40,000 Ohio auto industry workers laidoff at mid-year 1980, a substantial improvement in the fortunes of the industry would be necessary to re-employ those workers. Therefore, rapid absorption of most laidoff Chrysler workers would not be likely.

The location of new domestic or foreign-owned motor vehicle manufacturing plants in Ohio would help unemployed Chrysler workers. The planned Honda automobile assembly plant in Marysville is an example of such a facility. However, the extent to which Chrysler workers would be helped by new plant locations would depend on their proximity to the closed Chrysler facilities. Furthermore, the construction of facilities takes considerable time. They would not be employing manufacturing workers for a period of about two years, thus dampening or postponing the favorable impact of any new plant location in Ohio.

Some of Chrysler's Ohio facilities could be purchased and used by other motor vehicle manufacturers (domestic or foreign). To the extent such purchases would occur, work disruptions would probably be for a maximum of two years.[5] The relative attractiveness of Chrysler's Ohio facilities to other buyers is discussed next.

The Toledo machining plant, constructed in 1966, is a modern facility. The plant could be useful to large automotive supply companies or suppliers of other large industrial concerns. The plant is one of those pledged as collateral against the Government guaranteed loans at a fair market value of $104.6 million. ("Fair market value" is defined as the amount which a user, other than Chrysler Corporation, who could adapt the facilities to its production with minimal alterations might be expected to pay for the facility.)[6]

The Twinsburg stamping plant is a modern facility constructed in 1957. The plant could be a cornerstone for a foreign automotive manufacturer seeking to locate in the U.S. Assembly plants can be established in general purpose plants. But, stamping plants must be built expressly for that purpose and require a very heavy commitment of funds. Thus, it is reasonable to assume the Twinsburg plant (also pledged as part of the loan guarantee collateral) could be disposed of within a reasonable time at approximately its fair market value of $179.7 million.[7]

The Sandusky and Van Wert plants are both relatively small but considered modern. They may be useful to manufacturers of vinyl products, and powdered metal, magnet, and cold extrusion products, respectively. It is reasonable to assume these plants could be sold at their fair market values of $14.4 million and $17 million, respectively.[8]

As already noted, the Fostoria plant has been closed. It is an old plant, originally built in 1912. It is unlikely it could be sold for more than its "orderly liquidation value" (i.e., the amount that might be realized from piecemeal sale of the property).[9]

The Lima plant is a leased facility in which Chrysler builds the XM1, turbine powered main battle tank.[10] In the event of a Chrysler shutdown, it is likely the U.S. Government would find another firm to operate the plant for production of tanks.

The Dayton plant is old, having been built in 1915, but has modern equipment. It is valued at an orderly liquidation value of $21.4 million. A number of automotive companies could use these facilities. However, given current economic conditions in the automobile industry, such a prospect is considered remote.[11]

Finally, the impact on dealers from a Chrysler shutdown must be considered. Some of the former Chrysler dealers might make arrangements with foreign producers. However, most major foreign producers selling vehicles in the U.S. already have extensive and well-established dealer organizations. Therefore, the probability of many of the 260 Chrysler dealers in Ohio surviving as viable new car automobile retailers is not great.

In general, then, it can be concluded that in the event of a Chrysler shutdown most of its Ohio facilities would, in time, find use as manufacturing plants. Some of the plants (especially the Toledo and Twinsburg plants) likely would remain automotive industry facilities. However, a two- to five-year period of adjustment with at least temporary but extensive layoffs in these plants would occur. In addition, the impact on employment in Chrysler dealerships and suppliers in Ohio would be significant. If the problems associated with such an adjustment are to be avoided, Chrysler must remain a viable motor vehicle producer.

Minimal Optimal Scale In Auto Production

To properly assess the prospects for Chrysler's survival and its impact on Ohio, it is necessary to examine the scale economy issue. It is not possible to review all of the literature on scale economies and industrial organization here. At best, what is attempted is a brief summary of the evolution and present status of the scale economy issue as it relates to the automobile industry.

First, some terminology must be explained. Minimal Optimal Scale (M.O.S.) is defined as that output at which unit material plus production costs first attain a minimum value.[12] Plant-specific scale economies are associated with the overall sizes of plants. Another type of scale economy exists; i.e., the product-specific economies associated with the length of production runs for individual products. The product-specific economies are typically due to gains in production know-how and operative skill associated with accumulating production volume.[13]

Both plant and product-specific scale economies, i.e., annual output rates and total volume of units of a given car model produced through time, are a critical issue in the automobile industry. Table 5 summarizes automobile and truck output market shares and profits for the U.S. from 1973 to 1979. The seven-year period shows a complete cycle in the motor vehicle industry with both 1973 and 1978 being peak years in motor vehicle production.

Insight on the production capacity of the industry and, consequently, on scale economies in automobile production may be gained by examining Table 6.[14]

Historically, output of around 200,000 units per year per assembly plant achieves M.O.S. The average per as-

(Continued on page 4)

Chrysler and the Ohio Economy

(Continued from page 3)

TABLE 5
U.S. MOTOR VEHICLE MANUFACTURERS: PERCENTAGE OUTPUT SHARES, 1973-1979

	1973	1974	1975	1976	1977	1978	1979
				(Dollar amounts in millions)			
GENERAL MOTORS							
Cars	54.3	48.8	54.9	57.8	57.5	57.5	60.4
Trucks	41.8	39.6	42.3	43.7	40.5	39.7	42.8
$Profits	$2,398	$950	$1,253	$2,903	$3,338	$3,508	$2,893
FORD MOTOR COMPANY							
Cars	25.8	30.2	26.8	24.1	27.5	27.9	24.2
Trucks	31.5	32.6	30.8	30.1	34.5	37.2	34.7
$Profits	$907	$361	$323	$983	$1,678	$1,589	$1,169
CHRYSLER CORPORATION							
Cars	16.1	16.1	13.4	15.6	13.3	12.3	11.1
Trucks	12.6	13.0	14.1	15.0	13.8	12.5	10.2
$Profits (Loss)	$255	($52)	($260)	$423	$163	($205)	($1,097)
AMERICAN MOTORS							
Cars	3.7	4.8	4.8	2.5	1.7	1.8	2.2
Trucks	4.4	4.8	6.0	5.2	5.5	5.1	5.3
$Profits (Loss)	$86	$28	($28)	($46)	$6	$37	$84
VOLKSWAGEN							
Cars	.....	.....	.....	.....	.....	0.4	2.1
Trucks	.....	.....	.....	.....	.....	....	0.1
$Profits (World-wide)	.....	.....	.....	.....	.....	189	240
TOTAL UNITS: (Thousands)	12,674	10,051	8,990	11,483	12,738	13,043	11,391
Cars	9,667	7,309	6,740	8,537	9,294	9,153	8,418
Trucks	3,007	2,742	2,250	2,946	3,444	3,890	2,973

Source: *Automotive News Market Data Books, 1974, 1975, 1976, 1977, 1978, 1979, 1980* (Detroit, Michigan: Crain Publications) and *1979 Financial Statements* (Wolfsburg, Federal Republic of Germany: Volkswagenwerkaktiengesellschaft, July 1980).

TABLE 6
U.S. AUTOMOBILE MANUFACTURERS OUTPUT PER ASSEMBLY PLANT, 1977[a]

Company	Auto Output in U.S.[a]	Number of Assembly Plants in U.S.[b]	Average Number of Units per Assembly Plant
General Motors	5,339,685	22	242,713
Ford	2,555,866	14	182,562
Chrysler[c]	1,177,070	6	196,178
American Motors	156,984	1	156,984
Total	9,293,674	44	211,220

[a] *Automotive News, Market Data Book*, 1978 (Detroit: Crain Publications, 1978), p. 37.

[b] *Automotive News, Market Data Book*, 1977 (Detroit: Crain Publications, 1977), p. 38.

[c] Does not include production of two van models (Voyager and Sportsman) produced in a truck plant but registered as passenger cars (total output = 59,289 in 1977).

sembly plant in 1977 was 211,220. In the previous peak year of 1973 the average for 43 assembly plants was 224,817.

For an integrated automobile producer (one that produces major components such as bodies, engines, transmissions and assembles the parts into a completed vehicle), Joe Bain estimated output of 150,000 units would be necessary to be profitable with a single assembly plant.[15] Both Lawrence White and D. G. Rhys agree that M.O.S. can be achieved with approximately 200,000 units per year in an assembly plant operating on a two-shift basis.[16]

Rhys does make the important observation that new technology could lead to larger rates of output for M.O.S.[17] Indeed, the newer assembly line techniques in use in the U.S. by Chrysler and other firms suggest an increase in the M.O.S. level of auto assembly is occurring. This topic is discussed in detail later.

The apparent unanimity on M.O.S. estimates for auto assembly is not present among economists studying all stages of auto production. Bain estimated that reductions in average cost per unit could be obtained up to about 600,000 units per year.[18] White estimated M.O.S. in production (stampings) was achieved at a rate of 400,000 per year and in engine production at about 280,000 units per year. Therefore, he concluded that "a firm producing in the range of 400,000 cars a year would exhaust most of the production economies that exist."[19]

One qualification made by White was that a firm needs to diversify its risks and produce at least two lines of cars in order to have long-term success. Therefore, he concluded 800,000 cars a year split into two makes was necessary for survival.[20]

Rhys differed significantly from the estimates made by White. He found in machining operations the use of expensive equipment to manufacture one basic component or vehicle model requires high annual rates and total volumes of production to be cost justified. He estimated the M.O.S. in engine and transmission machining at nearly 1,000,000 units per year. In the production of auto bodies, Rhys concluded very large output is necessary to achieve efficient operations. He estimated the overall optimum level of annual output for an integrated auto producer at about 2,000,000 units per year.[21]

(Continued on page 5)

BULLETIN OF BUSINESS RESEARCH

STATISTICAL SUMMARY

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Business Conditions in Ohio and the United States

ITEM	OHIO						UNITED STATES					
				CHANGE FROM						CHANGE FROM		
		June 1980	May 1980	Last Month	Last Year			June 1980	May 1980	Last Month	Last Year	
	Unit or Index Base Period	(p)	(r)	June 1980 from May 1980	June 1980 from June 1979	6 months 1980 from 1979	*Unit or Index Base Period*	(p)	(r)	June 1980 from May 1980	June 1980 from June 1979	6 months 1980 from 1979
GENERAL BUSINESS				%	%	%				%	%	%
• Bank Debits[5, 11]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	*Bil. $ Ex.NY[d, h]*	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Number[12]	*Number*	n.a.	n.a	n.a.	n.a.	n.a.	*Number*	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures Liabilities[12]	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	n.a.	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	n.a.
Life Insurance Sales[6]	*1967*	332	346	— 4	+ 4	+ 10	*1967*	388	383	+ 1	+ 11	+ 12
INCOME												
• Total Personal Income[1, 13]	*Mil. Dol.[d, h]*	99,686	99,058	+ 1	+ 7	+ 8	*Bil. Dol.[d, h]*	2,086	2,078	+ x	+ 9	+ 10
Salaries & Wages Income[7, 13]	*Mil. Dol.[d, h]*	c	c	+ 2	— 3	— 2	*Bil. Dol.[d, h]*	1,310	1,309	+ x	+ 7	+ 9
Nonagricultural Income[13]		b	b	b	b	b	*Bil. Dol.[d, h]*	2,044	2,036	+ x	+ 10	+ 11
Employee Earn.—Gross Wkly.: Mfg.[14, 15]	*Dollars*	339.25	336.04	+ 1	+ 3	+ 4	*Dollars*	282.89	280.21	+ 1	+ 5	+ 6
" " Const.[14, 15]	*Dollars*	471.86	449.07	+ 5	+ 8	+ 9	*Dollars*	370.06	360.14	+ 3	+ 7	+ 7
Agr. Income (Cash Mktgs.)[16, 17]	*1957–59*	n.a.	n.a.	n.a.	n.a.	n.a.	*1967*	n.a.	n.a.	n.a.	n.a.	n.a.
EMPLOYMENT & UNEMPLOYMENT												
Civilian Labor Force[14, 15]	*Thousands*	5,156	5,035	+ 2	+ 2	+ 1	*Thousands*	106,067	104,028	+ 2	+ 2	+ 2
Civilian Employment[14, 15]	*Thousands*	4,654	4,596	+ 1	— 2	— 2	*Thousands*	97,776	96,709	+ 1	— x	+ 1
Nonagricultural Employment[14, 15]	*Thousands*	4,451	4,433	+ x	— 2	— 1	*Thousands*	94,039	93,273	+ 1	— x	+ 1
Mfg. Prod. Employment[7, 15]	*1967*	68	68	— x	— 16	— 12	*1967*	98	99	— 1	— 8	— 4
• Mfg. Prod. Payrolls[7, 15]	*1967*	157	157	+ x	— 15	— 10	*1967*	243	242	+ x	— 3	+ 2
Average Weekly Hours—Mfgr. Prod.[7, 15]	*Number*	40.1	40.1	— x	— 4	— 3	*Number*	39.4	39.3	+ x	— 2	— 1
Unemployment, Total—No.[14, 15]	*Thousands*	503	439	+ 15	+ 72	+ 32	*Thousands*	8,291	7,318	+ 13	+ 33	+ 20
Unemployment, Total—Rate[14, 15]	*Percent*	9.7	8.7				*Percent*	7.8	7.0			
Unemployment, Insured[14, 15]	*Thousands*	235	212	+ 11	+163	+ 80	*Thousands*	3,779	3,680	+ 3	+ 79	+ 36
Registered for Work, O.B.E.S.[14]	*Thousands*	376	383	— 2	+ 13	+ 14		b	b	b	b	b
Unemployment Compensation Fund[14]	*Mil. Dol.*	224	325	— 31	— 58	— 29		b	b	b	b	b
PRODUCTION												
Gross National Product (Quarterly)[13]		b	b	b	b	b	*Bil. Dol.[d, h]*	2,523	2,521	+ x	+ 8	+ 9
Industrial Production[7, 11]	*1967*	c	c	— x	— 20	— 15	*1967[d]*	141	145	— 2	— 8	— 2
• Steel Production[18]	*Thous. Tons*	1,079	1,371	— 21	— 44	— 23	*Thous. Tons*	7,501	9,226	— 19	— 39	— 16
Electric Power Production[8]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	*Mil. KWH*	n.a.	n.a.	n.a.	n.a.	n.a.
Bituminous Coal Production[19]	*Thous. Tons*	4,149	4,320	— 4	+ 1	+ 4	*Thous. Tons*	n.a.	n.a.	n.a.	n.a.	n.a.
Pig Iron Production[18]	*Thous. Tons*	756	939	— 20	— 42	— 23	*Thous. Tons*	4,664	5,906	— 21	— 42	— 18
Machine Tools—Shipments[20]		b	b	b	b	b	*Mil. Dol.*	n.a.	373.75	n.a.	n.a.	n.a.
Machine Tools—New Orders[20]		b	b	b	b	b	*Mil. Dol.*	n.a.	453.40	n.a.	n.a.	n.a.
Durable Goods—New Orders[13]		b	b	b	b	b	*Mil. Dol.[d]*	66,626	67,328	— 1	— 12	— 5
CONSTRUCTION (Value of Contracts)												
• Total (Seas. Adj.)[9, 21]	*1967[d]*						*1967[d]*					
Total[9, 21]	*1967[f]*	164	147	+ 12	— 42	— 28	*Mil. Dol.*	12,425	11,135	+ 12	— 18	— 25
Residential Building[9, 21]	*1967[f]*	158	142	+ 11	— 46	— 45	*Mil. Dol.*	5,092	4,495	+ 13	— 30	— 31
Nonresidential Building[9, 21]	*1967[f]*	168	129	+ 30	— 41	— 14	*Mil. Dol.*	4,861	4,135	+ 18	+ 6	+ x
Utilities and Non-Building Const.[9, 21]	*1967[f]*	168	204	— 17	— 32	— 18	*Mil. Dol.*	2,471	2,505	— 1	— 24	— 41
DISTRIBUTION												
Total Retail Sales[2, 13]	*1957–59[d]*	271	288	— 6	— 6	+ x	*Mil. Dol.[d]*	75,345	74,265	+ 1	+ 5	+ 7
Department Store Sales[2, 13]	*1957–59[d]*	274	258	+ 6	— 3	+ 2	*Mil. Dol.[d]*	7,791	7,727	+ 1	+ 8	+ 9
• New Passenger Cars Registered[3, 22]	*1967*	87	83	+ 4	— 35	— 25	*No.–49 sts.*	675,964	733,229	— 8	— 23	— 15
New Trucks Registered[3, 22]	*No.–44 cos.*	4,140	3,741	+ 11	— 36	— 41	*No.–48 sts.*	210,673	206,868	+ 2	— 24	— 27
Used Cars Registered[3]	*No.–32 cos.*	30,624	31,033	— 1	— 14	— 12		b	b	b	b	b
PRICES												
Consumer Price Index[15]:												
All Urban Consumers		b	b	b	b	b	*1967*	248	245	+ 1	+ 14	+ 14
Wage Earners & Clerical Workers		b	b	b	b	b	*1967*	248	245	+ 1	+ 14	+ 14
Producer Price Index[15]:												
All Commodities		b	b	b	b	b	*1967*	265	264	+ 1	+ 14	+ 15
Finished Goods		b	b	b	b	b	*1967*	243	241	+ 1	+ 14	+ 13
Intermediate Materials		b	b	b	b	b	*1967*	278	276	+ 1	+ 16	+ 17
Crude Materials		b	b	b	b	b	*1967*	300	301	— x	+ 6	+ 9
Sensitive Indus. Commodities[15]		b	b	b	b	b	*1967*	268	279	— 4	— 9	+ 6
BANKING AND FINANCE												
• Bank Loans, Large Banks—Total[11]	*Mil. Dol.*	25,605	25,168	+ 2	+ 19	+ 20	*Mil. Dol.*	406,560	404,287	+ 1	+ 7	+ 12
" " " " Bus. & Agric.[11]	*Mil. Dol.*	9,072	9,127	— 1	+ 13	+ 18	*Mil. Dol.*	163,334	161,940	+ 1	+ 9	+ 14
Stock Price Index—400 Indust.[23]		b	b	b	b	b	*1941–43 = 10*	130.4	121.0	+ 8	+ 16	+ 11
" " " 40 Utils.[23]		b	b	b	b	b	*1941–43 = 10*	54.0	50.1	+ 8	+ 6	— 1
" " " 20 Trans.[23]		b	b	b	b	b	*1970 = 10*	16.4	15.2	+ 8	+ 11	+ 13
Yield, Corp. AAA Bonds[23]		b	b	b	b	b	*Percent*	9.90	10.78	— 8	+ 9	+ 22

• Indicates series charted (page S-1). For sources and footnotes, see page S-3.

Business Conditions in the 8 Largest OHIO CITIES

ITEM	Unit or Index Base Period	June 1980 (p)	May 1980 (r)	Change From Last Year: June 1980 from June 1979	Change From Last Year: 6 months 1980 from 1979	June 1980 (p)	May 1980 (r)	Change From Last Year: June 1980 from June 1979	Change From Last Year: 6 months 1980 from 1979	June 1980 (p)	May 1980 (r)	Change From Last Year: June 1980 from June 1979	Change From Last Year: 6 months 1980 from 1979	June 1980 (p)	May 1980 (r)	Change From Last Year: June 1980 from June 1979	Change From Last Year: 6 months 1980 from 1979
		AKRON				**CANTON**				**CINCINNATI**				**CLEVELAND**			
				%	%			%	%			%	%			%	%
Number Employed[7]:																	
Total[w]	*1967*	79	79	— 7	— 5	91	92	— 9	— 5	88	87	— 10	— 8	84	84	— 11	— 7
Manufacturing	"	55	56	— 14	— 11	80	83	— 13	— 8	62	62	— 17	— 17	59	60	— 25	— 16
Trade, Serv., & Utils.	"	111	109	— 3	— 1	110	109	— 4	— 1	116	113	— 5	+ x	109	109	— x	+ x
Construction	"	68	50	— 8	— 11	74	75	— 12	— 9	75	67	— 18	— 13	73	64	— 10	— 5
Payrolls[7]:																	
Total[w]	"	175	173	+ 2	+ 2	224	228	— 8	— 1	229	214	— 6	— 6	191	186	— 10	— 5
• Manufacturing	"	126	128	— 1	— 3	189	202	— 15	— 5	153	151	— 18	— 18	126	125	— 29	— 20
Trade, Serv., & Utils.	"	267	264	+ 5	+ 6	315	302	+ 2	+ 5	330	301	+ 3	+ 5	273	268	+ 7	+ 8
Construction	"	173	122	+ 1	4	191	172	+ 6	+ 7	215	172	— 8	— 6	216	173	+ x	+ 4
Emp. Earn.—Gross Wkly.[7]:																	
All Industries[w]	$	337.41	332.73	+ 12	+ 9	318.19	318.75	+ x	+ 3	299.82	284.21	+ 4	+ 2	354.12	344.78	+ 2	+ 2
Manufacturing	"	398.25	390.64	+ 15	+ 10	343.48	351.71	— 3	+ 2	345.19	334.50	+ 3	+ 2	368.69	359.07	— 4	— 3
Trade, Serv., & Utils.	"	249.26	249.03	+ 8	+ 7	260.06	252.24	+ 5	+ 4	233.04	216.91	+ 5	+ 2	320.30	315.13	+ 8	+ 8
Construction	"	481.94	467.78	+ 8	+ 8	465.33	432.87	+ 7	+ 8	506.53	450.72	+ 13	+ 9	540.83	493.28	+ 11	+ 10
Retail Sales[2]	%	c	c	— 3	— 2	c	c	— 4	— x	c	c	— 1	+ 1	c	c	— 9	— 4
Auto Titles[3]:																	
New Cars	*No.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4,101	3,690	— 25	— 21	5,852	6,046	— 39	— 27
New Trucks	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	537	562	— 29	— 38	543	661	— 46	— 37
Retail Food Prices[15]	*1967*	b	b	b	b	b	b	b	b	264	265	+ 7	+ 6	246	249	+ 2	+ 4
Bank Debits[5]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	*No.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	*Thous. $*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	*1967[f]*	125	130	— 17	— 10	b	b	b	b	b	b	b	b	b	b	b	b
Value of Bldg. Const.[9]:																	
Total	"	118	121	— 40	— 35	114	230	— 48	— 20	74	198	— 75	— 40	140	38	— 5	— 2
Residential	"	64	162	— 75	— 41	106	78	— 63	— 46	73	214	— 40	— 46	67	39	— 48	— 42
Nonresidential	"	172	79	+ 25	— 30	123	416	— 6	+ 18	75	182	— 83	— 36	206	37	+ 25	+ 25
Steel Production[18]	*1967[g]*	b	b	b	b	b	b	b	b	79	94	— 29	— 13	97	106	— 32	— 14
Labor Force Estimates[14]:																	
Civilian Labor Force	*Thous.*	244.1	241.5	+ 1	+ x	177.9	173.4	+ 4	+ 2	431.6	421.3	— 1	— 2	752.7	734.5	+ x	— 2
Civilian Employment	"	222.1	222.0	— 2	— 1	160.3	159.0	— 1	+ x	399.1	392.2	— 3	— 3	690.3	678.3	— 3	— 3
Unemp. Total—No.	"	22.0	19.5	+ 44	+ 21	17.6	14.4	+ 89	+ 36	32.5	29.1	+ 46	+ 15	62.4	56.2	+ 67	+ 27
Unemp., Total—Rate	%	9.0	8.1			9.9	8.3			7.5	6.9			8.3	7.7		
		COLUMBUS				**DAYTON**				**TOLEDO**				**YOUNGSTOWN**			
				%	%			%	%			%	%			%	%
Number Employed[7]:																	
Total[w]	*1967*	98	97	— 3	— 4	100	99	— 10	— 4	89	86	— 15	— 12	78	80	— 9	— 5
Manufacturing	"	65	59	— 4	— 11	57	58	— 23	— 13	54	49	— 39	— 32	47	49	— 21	— 14
Trade, Serv., & Utils.	"	122	123	— 3	— 2	160	160	— 3	+ 1	122	121	+ x	+ 1	119	119	— 2	— 1
Construction	"	69	67	— 10	+ 4	108	89	+ 8	+ 3	87	83	— x	+ 10	53	52	+ 1	— 1
Payrolls[7]:																	
Total[w]	"	241	229	+ 5	+ 3	200	194	— 9	— 2	217	204	— 10	— 9	186	184	— 1	+ 1
• Manufacturing	"	138	127	— 7	— 9	125	123	— 26	— 12	126	110	— 33	— 32	123	126	— 15	— 8
Trade, Serv., & Utils.	"	336	325	+ 10	+ 7	347	346	+ 8	+ 9	338	331	+ 8	+ 8	309	300	+ 9	+ 9
Construction	"	185	167	+ 7	+ 17	288	215	+ 15	+ 12	230	207	+ 8	+ 18	150	139	+ 24	+ 6
Emp. Earn.—Gross Wkly.[7]:																	
All Industries[w]	$	292.66	282.06	+ 7	+ 7	353.33	344.98	+ x	+ 3	359.13	344.23	+ 13	+ 7	329.97	321.05	+ 8	+ 6
Manufacturing	"	341.75	335.33	+ 1	+ 4	382.34	372.12	— 6	— x	394.86	382.08	+ 11	+ 2	374.40	365.45	+ 6	+ 5
Trade, Serv., & Utils.	"	243.82	235.03	+ 10	+ 7	296.67	295.10	+ 11	+ 8	307.20	292.42	+ 17	+ 13	254.97	249.30	+ 10	+ 10
Construction	"	445.15	398.40	+ 19	+ 13	475.50	433.75	+ 6	+ 9	518.93	486.23	+ 4	+ 5	489.31	457.54	+ 16	+ 4
Retail Sales[2]	%	c	c	— 5	— 4	n.a.	n.a.	n.a.	n.a.	c	c	— 8	— 4	c	c	— 13	— 5
Auto Titles[3]:																	
New Cars	*No.*	3,839	3,551	— 24	— 20	1,988	2,013	— 41	— 23	1,797	n.a.	— 34	n.a.	1,016	987	— 37	— 28
New Trucks	"	689	758	— 32	— 25	283	275	— 50	— 52	201	n.a.	— 51	n.a.	142	111	— 54	— 37
Retail Food Prices[15]	*1967*	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
Bank Debits[5]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures[12]:																	
Failures	*No.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Liabilities	*Thous. $*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	*1967[f]*	b	b	b	b	b	b	b	b	131	128	— 17	— 13	70	71	— 19	— 14
Value of Bldg. Const.[9]:																	
Total	"	118	114	— 48	— 36	65	107	— 68	+ 2	198	76	— 71	— 52	111	114	— 74	— 43
Residential	"	185	120	— 10	— 29	36	48	— 83	— 59	39	180	— 74	— 48	154	74	— 68	— 60
Nonresidential	"	51	108	— 79	— 41	102	180	— 47	+ 67	282	21	— 71	— 54	60	162	— 83	— 21
Steel Production[18]	*1967[g]*	b	b	b	b	b	b	b	b	b	b	b	b	42	54	— 53	— 29
Labor Force Estimates[14]:																	
Civilian Labor Force	*Thous.*	438.6	429.8	+ x	— 1	275.3	269.2	+ x	— 1	225.4	221.0	— 1	— 1	132.0	129.3	+ 1	— 1
Civilian Employment	"	411.5	405.7	— 1	— 1	249.2	246.3	— 2	— 2	199.0	195.3	— 6	— 4	115.5	114.1	— 6	— 4
Unemp. Total—No.	"	27.1	24.2	+ 18	— 3	26.1	22.9	+ 32	+ 21	26.4	25.7	+ 65	+ 44	16.5	15.2	+ 85	+ 39
Unemp., Total—Rate	%	6.2	5.6			9.5	8.5			11.7	11.6			12.5	11.7		

NOTE: All data are for county areas except bank debits and commercial failures, which are for areas within city limits. The indexes of number employed and payrolls and the employee weekly earnings are based on data for production workers in manufacturing, construction workers in contract construction, and nonsupervisory employees in other categories which exclude agriculture, government, education, and public institutions.

• Indicates series charted (page S-1). For sources and footnotes, see page S-3.

Number Employed, Payrolls, and Man-Hours in Ohio Industry

INDUSTRIAL GROUP	NUMBER EMPLOYED[7]					PAYROLLS[7]					MAN-HOURS[7]				
	INDEX (1967 = 100)		CHANGE			INDEX (1967 = 100)		CHANGE			INDEX (1967 = 100)		CHANGE		
	June 1980 (p)	May 1980 (r)	June 1980 from May 1980	June 1980 from June 1979	6 months 1980 from 1979	June 1980 (p)	May 1980 (r)	June 1980 from May 1980	June 1980 from June 1979	6 months 1980 from 1979	June 1980 (p)	May 1980 (r)	June 1980 from May 1980	June 1980 from June 1979	6 months 1980 from 1979
			%	%	%			%	%	%			%	%	%
Total[w] (2,198)[a]	**84**	**83**	**+ x**	**— 9**	**— 6**	**192**	**187**	**+ 3**	**— 5**	**— 2**	**81**	**79**	**+ 2**	**— 10**	**— 7**
All Manufacturing[w] (1,179)	**68**	**68**	**— x**	**— 16**	**— 12**	**157**	**157**	**+ x**	**— 15**	**— 10**	**62**	**62**	**— x**	**— 20**	**— 15**
Chemicals (62)	97	96	+ x	— 3	— 7	210	211	— x	— 5	— 10	90	89	+ 1	— 9	— 12
Food Products (77)	80	78	+ 3	+ 2	— 1	200	194	+ 3	+ 8	+ 8	71	69	+ 3	— x	— 1
Bakery	76	76	+ 1	— 3	— 1	192	188	+ 2	+ 7	+ 9	73	74	— 1	— 6	— 1
Miscellaneous	80	78	+ 3	+ 2	— 1	200	194	+ 3	+ 8	+ 8	70	67	+ 3	+ x	— 1
Lumber Products (37)	80	84	— 5	— 19	— 14	169	176	— 4	— 11	— 4	71	74	— 4	— 20	— 13
Furniture	88	94	— 6	— 19	— 14	188	195	— 4	— 8	— 2	83	87	— 5	— 19	— 12
Miscellaneous	67	67	— 1	— 21	— 15	140	147	— 5	— 17	— 8	55	56	— 3	— 23	— 16
Machinery (271)	66	67	— 2	— 10	— 6	147	150	— 2	— 7	+ 1	63	63	— x	— 12	— 7
Elec. Mach., Apparatus and Supplies	72	73	— 1	— 12	— 5	166	170	— 3	— 9	+ 2	70	66	+ 2	— 11	— 6
Machine Tools	62	62	+ 1	— 3	— 1	146	143	+ 2	+ 3	+ 8	62	62	+ x	— 6	— 1
Agricultural Equipment	44	32	+ 36	— 17	— 19	96	76	+ 27	— 17	— 11	47	35	+ 35	— 21	— 20
Special Machinery and Appliances	61	64	— 6	— 10	— 8	127	133	— 4	— 7	— 3	55	59	— 6	— 14	— 11
Metal Products (321)	73	72	+ 1	— 19	— 13	168	164	+ 2	— 19	— 11	63	62	+ x	— 25	— 17
Foundry Products and Drop Forgings	78	67	+ 16	— 24	— 19	194	152	+ 27	— 26	— 21	61	52	+ 19	— 30	— 24
Pipes, Valves, and Plumbers' Supplies	57	48	+ 20	— 36	— 23	136	115	+ 19	— 38	— 19	59	51	+ 17	— 41	— 26
Screw Machine Products and Hdwe.	78	75	+ 4	— 22	— 14	140	135	+ 4	— 24	— 16	70	68	+ 2	— 30	— 21
Sheet Metal Work	74	77	— 4	— 26	— 20	174	169	+ 3	— 24	— 17	61	63	— 2	— 29	— 22
Steel Works and Rolling Mills	70	75	— 6	— 14	— 7	156	167	— 7	— 16	— 5	61	65	— 6	— 22	— 13
Stoves and Furnaces	51	65	— 20	— 52	— 32	98	131	— 25	— 53	— 26	54	68	— 21	— 53	— 32
Miscellaneous	71	68	+ 5	— 16	— 13	164	155	+ 5	— 14	— 8	60	58	+ 3	— 19	— 14
Paper and Printing (125)	61	61	— x	— 7	— 6	155	154	+ 1	— 3	+ 1	55	56	— x	— 11	— 8
Paper and Pulp	46	44	+ 3	— 8	— 4	148	147	+ 1	— 5	+ 4	37	37	— x	— 14	— 6
Printing and Publishing	74	74	— x	— 7	— 6	171	170	+ x	— 4	— 2	68	68	+ x	— 8	— 6
Miscellaneous	60	61	— 2	— 5	— 6	147	146	+ 1	— 1	+ x	59	59	— 1	— 10	— 10
Rubber Products (50)	55	56	— 2	— 25	— 17	133	132	+ x	— 26	— 16	49	49	— 1	— 30	— 21
Tires and Tubes	45	47	— 3	— 12	— 9	99	101	— 2	— 9	— 9	33	33	— 2	— 17	— 15
Miscellaneous	60	61	— 1	— 30	— 20	157	154	+ 2	— 34	— 19	61	61	+ x	— 36	— 23
Stone, Clay, and Glass Products (88)	67	69	— 3	— 13	— 7	167	177	— 5	— 7	— 1	70	75	— 6	— 15	— 8
Brick and Tile	47	51	— 8	— 25	— 15	93	106	— 12	— 25	— 11	44	51	— 13	— 29	— 17
Glass	72	76	— 4	— 10	— 5	164	178	— 8	— 7	— 1	70	77	— 9	— 12	— 6
Vitreous & Semi-vit. China & Pottery	50	51	— 2	— 13	— 5	156	158	— 1	+ 3	+ 7	76	78	— 3	— 11	— 5
Miscellaneous	79	79	— x	— 13	— 7	211	209	+ 1	— 8	— 3	80	80	— x	— 17	— 11
Textiles (37)	72	69	+ 5	— 7	— 8	108	102	+ 6	— 7	— 6	67	64	+ 4	— 15	— 12
Men's Clothing	82	82	+ 1	— 3	— 4	109	110	— x	— 4	— 4	71	72	— 1	— 11	— 11
Miscellaneous	67	61	+ 9	— 9	— 11	111	99	+ 12	— 10	— 8	65	60	+ 8	— 17	— 12
Vehicles (58)	56	56	+ 1	— 40	— 34	140	135	+ 4	— 39	— 37	49	48	+ 2	— 43	— 39
Autos and Parts	58	56	+ 3	— 46	— 41	150	141	+ 6	— 45	— 43	50	48	+ 4	— 49	— 46
Cars, Electric and Steam Railway	88	95	— 7	— 24	— 8	209	223	— 6	— 23	— 5	77	86	— 11	— 34	— 13
Miscellaneous	58	60	— 4	+ 13	+ 21	134	138	— 3	+ 24	+ 34	56	59	— 4	+ 9	+ 19
Miscellaneous Manufacturing (53)	58	59	— 2	— 14	— 9	135	137	— 2	— 2	+ 3	54	55	— 2	— 13	— 8
Total Trade, Service, and Utilities[w] (666)	**102**	**102**	**+ x**	**— 3**	**— 1**	**243**	**238**	**+ 2**	**+ 6**	**+ 7**	**108**	**104**	**+ 3**	**— 3**	**— 1**
Service (198)	128	126	+ 1	+ x	+ 3	274	265	+ 3	+ 11	+ 11	147	137	+ 7	+ x	+ 3
Trade, Retail and Wholesale (366)	87	87	— 1	— 6	— 4	206	203	+ 2	+ 2	+ 3	87	86	+ 1	— 6	— 4
Transportation & Public Utilities (102)	108	108	— x	— 1	+ x	301	296	+ 2	+ 8	+ 9	108	106	+ 1	— 1	— x
Construction (325)	**73**	**65**	**+ 12**	**— 4**	**— 2**	**207**	**169**	**+ 23**	**+ 12**	**+ 12**	**71**	**59**	**+ 20**	**+ 2**	**+ 4**
Mines and Quarries (28)	**130**	**127**	**+ 2**	**+ 2**	**— 1**	**299**	**291**	**+ 3**	**+ 12**	**+ 10**	**80**	**79**	**+ 2**	**+ x**	**— 1**

Indexes of number employed and of payrolls are based on the employment of 439,215 persons (production workers in manufacturing and mining, construction workers in contract construction, and nonsupervisory employees in other categories) in 2,198 firms; indexes of man-hours, on the employment of 425,067 production workers and nonsupervisory employees in 2,097 firms. Figures in parentheses show number of firms reporting employment and payrolls. In some cases fewer firms report man-hours. Data do not include agriculture, government, education, or public institutions. For sources and footnotes, see below.

FOOTNOTES FOR BULLETIN TABLES AND CHARTS

†Change in number of failures; [a]Figures in parentheses show number of firms reporting this month; [n.a.]Current data not available; [b]Comparable data not available; [c]Only percentage of change available; [d]Adjusted for seasonal change; [f]Adjusted for number of working days; [g]Four weeks average; [h]Annual rate; [p]Preliminary; [r]Revised; [s]Series revised; [w]Weighted; [x]Less than 0.5 percent; [y]More than 1,000 percent increase.

Primary Sources:

Computed from: [1]Center for Business and Economic Research multiple regression model.

Computed from original data collected by the Center for Business and Economic Research from: [2]Ohio retailers; [3]County Clerks of Courts; [4]Local Power and Light Companies.

Computed by the Center for Business and Economic Research from data supplied by: [5]Board of Governors of the Federal Reserve System; [6]Life Insurance Marketing and Research Association; [7]Division of Research and Statistics of the Ohio Bureau of Employment Services, collected in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor; [8]Federal Power Commission; [9]F. W. Dodge Division, McGraw-Hill Information Systems Company; [10]Dun & Bradstreet, Inc.

Other data sources: [11]Federal Reserve Board; [12]Dun & Bradstreet, Inc.; [13]U.S. Department of Commerce; [14]Division of Research and Statistics of the Ohio Bureau of Employment Services; [15]U.S. Department of Labor; [16]Department of Agricultural Economics, O.S.U.; [17]U.S. Department of Agriculture; [18]American Iron and Steel Institute; [19]U.S. Department of Energy; [20]National Machine Tool Builders' Association; [21]F. W. Dodge Division, McGraw-Hill Information Systems Company; [22]R. L. Polk & Co.; [23]Standard & Poor's Corporation.

Note: In the Ohio-U.S. table, page S-1, dual source notes on a single line of the table stub refer first to Ohio data, second to U.S. data.

Ohio Retail Sales Trends

Sales of Ohio Retailers in June were 6 percent lower than sales in May, both before and after adjustment for seasonal variation. June sales this year also were 6 percent lower than June sales in 1979.

For the First Half of 1980, total retail sales were less than 0.5 percent below sales in the first half of 1979. A composite index of "total sales *excluding* motor vehicles," which was computed to show the effect of a 20 percent decline in motor vehicle sales in the first half of 1980, showed an increase of 5 percent in the first half of 1980 compared with sales without vehicles in the first half of 1979.

By Kind of Business, sales in the first half of 1980 were higher than 6-month sales last year in 14 of the 22 lines shown individually—and ranged from a 29 percent gain in general stores to a 1 percent increase in eating and drinking places. Among the 8 kinds of business with first-half declines from 1979, the degree of decline ranged from the 20 percent drop in motor vehicles to a fractional decline in men's clothing stores.

INDEXES OF OHIO RETAIL SALES

KIND OF BUSINESS	UNADJUSTED INDEX (1957-59 = 100)		CHANGE			
	June 1980 (p)	May 1980 (r)	June 1980 from May 1980 Not Seas. Adj.	June 1980 from May 1980 Seas. Adj.	June 1980 from June 1979	6 months 1980 from 1979
				%	%	%
Total Retail Stores[2] *	**278**	**297**	**— 6**	**— 6**	**— 6**	**— x**
Grocery Stores	325	346	— 6	— 7	— 2	+ 9
Other Food Stores	406	375	+ 8	+10	+ 8	+11
General Stores (With Food)	174	183	— 5	— 9	+20	+29
Department Stores	242	241	+ x	+ 6	— 3	+ 2
Other General Merchandise	211	275	—23	—22	+ 1	+14
Men's Clothing-Furns. Stores	113	122	— 8	—15	— 9	— x
Family Clothing Stores	136	155	—12	— 7	— 7	+ 6
Women's Ready-to-Wear Stores	128	135	— 5	+ 6	— 8	— 2
Shoe Stores	99	108	— 8	— 8	— 5	—
Furniture Stores	198	211	— 6	— 2	—11	— 1
Household Appl.-TV-Rdio Strs.	182	165	+10	+ 2	— 1	— 2
Home Furnishings Stores	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Motor Vehicle Dealers	320	286	+12	+11	—16	—20
Other Automotive	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Filling Stations	377	441	—15	—15	— x	+ 7
Lumber-Bldg. Matls. Dealers	253	245	+ 3	— 5	—27	—14
Paint, Glass & Wallpaper Strs.	236	208	+14	— 1	— 1	+13
Heat.-Plumb. & Elec. Sup. Strs.	214	192	+11	— 4	— 2	+10
Hardware Stores	261	287	— 9	— 8	— 3	+ 2
Farm Equipment Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Eating & Drinking Places	191	220	—13	—11	— 8	+ 1
Drug Stores	274	299	— 8	— 6	+ 3	+15
Jewelry Stores	180	191	— 6	—11	— 1	+ 7
Florists	168	285	—41	—13	— 4	— 3
Fuel Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hay-Feed, Farm & Grdn. Strs.	474	736	—26	—20	+24	+12
State Liquor Stores	205	178	+15	+13	+23	+ 9

For sources and footnotes, see page S-3.

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Chrysler and the Ohio Economy

(Continued from page 4)

Further evidence on very extensive automotive scale economies is presented by John McGee in a thorough investigation of auto body manufacture.[22] The major issue between McGee and White is whether dies used in auto body manufacture do in fact wear out. McGee, as had Rhys, found that what appear to be changes in designs of auto bodies are accomplished through modifications of existing dies. He states:

> I have personally inspected many dies, each of which has already produced several millions of parts. They are still in production. None has "worn out" . . . Several millions of units, not 400,000 units [the White estimate] is the volume limit for auto panels, if indeed any exist.[23]

McGee concludes that with present body plant technology no automotive firm has achieved large enough output (on a rate per year basis or total volume of units produced of a given model) to exhaust the technical scale economies.[24] The Rhys and McGee conclusions, therefore, help explain the increased concentration in the world automobile industry since the end of World War II. Examples of the concentration include the merger of Nash and Hudson and later Jeep into American Motors; the Studebaker-Packard merger; and in Europe the Peugeot-Citroen combination which now includes the former Chrysler-European operations (Rootes in England and Simca in France). These combinations are a result of the need to exploit the extensive scale economies in the industry.

Finally, McGee's findings are consistent with the theories of John Menge advanced in 1962. Briefly, Menge concluded that the necessity and cost of making frequent style changes to attract consumers made it difficult for smaller automobile manufacturers to survive with low volumes of output.[25]

Chrysler Survival and Scale Economies

The Rhys and McGee conclusions have very serious implications for the long-term survival strategy of the Chrysler Corporation. The current financial problems of Chrysler can be understood in the context of the scale economy discussion. Chrysler has lost both absolute and relative auto market share during the last seven years (see Table 5). If Chrysler is to survive, it must arrange its production capabilities to achieve maximum rates of output. In addition, its marketing and designing efforts must be concentrated on achieving high volumes of model output without frequent design changes in order to exploit product-specific scale economies.

Because of its financial crisis and reduced market penetration, Chrysler has begun to undertake actions to use some facilities more intensively (i.e., at higher rates). As a result, redundant plants have been closed.

Among the facilities closed has been the Hamtramck, Michigan plant which produced Volare and Aspen models. The almost 70-year-old plant was closed at the end of 1979.[26]

At present, the future of the Lynch Road assembly plant in Detroit is uncertain. In 1979, $57 million of reconstruction was undertaken at Lynch Road as part of a $250 million project to downsize 1979 large Dodge St. Regis and Chrysler Newport and New Yorker models.[27] Table 7 indicates that output at Lynch Road (109,007 in 1979) was only half that traditionally assumed to be needed to achieve M.O.S. in auto assembly.

On May 18, 1980, Chrysler announced it would close Lynch Road.[28] Then on June 30, 1980, Chrysler announced it would keep Lynch Road open at least until December 1980, to produce some 1981 large cars. Apparently, reversal of the decision came as a result of pressure from dealers to continue the larger cars and discussion with the United Auto Workers in an attempt to save jobs.[29]

New-car tooling and plant reconversion costs are usually recovered over a five- to six-year period. If Chrysler closes Lynch Road after only about two years of low production rates, the cost per unit produced of the larger cars will be relatively high.

Other assembly plant closings reflect changes in the truck production expectations of Chrysler. In the past year it has made the decision to close two of its three U.S. truck assembly plants. (Production of Chrysler's light trucks and vans uses technology similar to auto assembly.)

Until 1979, Chrysler had two truck assembly plants—Warren, Michigan and Fenton, Missouri. The expanding light truck market in the mid-1970's led to conversion of the Jefferson Avenue auto assembly plant to van assembly in 1979. However, truck and van sales fell in 1979 and 1980 (see Table 5). Therefore, Chrysler decided to reconvert its Jefferson Avenue plant to auto assembly and close the Fenton, Missouri plant in the summer of 1980.[30]

The reduced output of Chrysler has meant that some facilities which support assembly operations have had to be closed as well. Closed in August 1980 was the Windsor, Ontario engine plant which made large V-8 engines.[31] In April 1980 the Fostoria, Ohio foundry was closed. Another Chrysler plant closed in the past year was the Lyons, Michigan trim plant.[32]

It was suggested earlier that new technologies could raise the M.O.S. rate of output in automobile assembly. Indeed, the highly automated Chrysler Belvidere, Illinois plant appears to have an M.O.S. of about 300,000 units annually (see Table 7). For 1981, Chrysler plans to introduce two new front-wheel drive downsized compact cars called the Plymouth Reliant and Dodge Aries (code name "K-cars") to replace the Volare and Aspen, respectively. Output capabilities will be 600,000 units per year from two assembly plants (Newark and Jefferson Avenue).[33] These figures would imply output of about 300,000 from each of the plants which in the past produced only two-thirds that number (see Table 7).

(Continued on page 6)

Chrysler and the Ohio Economy

(Continued from page 5)

TABLE 7
CHRYSLER CORPORATION AUTOMOTIVE PLANTS PRODUCTION RATES, 1978 AND 1979[a]

Assembly Plant	Models Produced	Output 1979	Output 1978
Belvidere, Illinois	Horizon, Omni	318,073	288,236
Hamtramck, Michigan	Aspen, Volare	(est.) 150,000	195,245
Newark, Delaware	Aspen, Volare	162,592	189,167
St. Louis, Missouri	Le Baron, Diplomat, Caravelle	163,501	231,156
Lynch Road (Detroit)[b]	St. Regis, Newport, New Yorker (1978 figure includes Monaco and Fury models)	109,007	134,784
Jefferson Ave. (Detroit)[c]		....	43,687
Total		903,173	1,082,275
Average output per auto assembly plant		180,635	180,379

[a] *Automotive News, Market Data Book*, 1980 (Detroit: Crain Publications, April 30, 1980) and Motor Vehicle Manufacturers Association, *Motor Vehicle Facts and Figures*, 1979 (Detroit: Motor Vehicle Manufacturers Association, 1979), p. 19.

[b] 1978 figures include large size Chrysler Newports and New Yorker, and intermediate Dodge Monaco, and Plymouth Fury; 1979 figures reflect production of only large cars (Dodge St. Regis and Chrysler Newports and New Yorkers).

[c] Converted to light truck production for 1979 model year.

New technology, in the form of automatic welding machines (robot welders) and computerized materials handling and painting equipment, has been installed in these plants. The Jefferson Avenue plant reconversion cost $100 million and the Newark renovations cost $50 million. The improved technology will raise output from 60 cars per hour maximum to 70 units per hour, or about 300,000 per year capacity in each plant.[34] Added evidence of an increased rate of output for M.O.S. in auto assembly to 300,000 units annually is the G.M. announcement of a new Buick assembly plant with a capacity of 300,000 units per year.[35] In fact, G.M.'s Lordstown, Ohio auto assembly plant, highly automated and using "robot" welders, was producing over 300,000 units per year in the early 1970's.

The importance of both product-specific and plant-specific scale economies to Chrysler and its Ohio plants is evident in its decision to accelerate conversion to building practically all front-wheel drive vehicles. For the 1981 model year, about 50 percent of Chrysler's estimated production will be rear-wheel drive vehicles (a segment of the market that is generally considered to be declining).[36] Therefore, to the extent sales of these vehicles are depressed, Chrysler will not be able to take advantage of plant-specific scale economies in the plants manufacturing these units.

At present (1980), Chrysler has four basic vehicles: (1) Omni/Horizon; (2) Aspen/Volare/Diplomat/Le Baron; (3) large Dodges, Plymouths, and Chryslers; and (4) vans and light trucks. Chrysler needs to reduce dependency on rear-wheel drive vehicles and take advantage of product-specific scale economies by sharing components across several vehicle lines which can be produced for long periods of time. Chrysler has announced that by Fall 1982 it will be selling essentially only front-wheel drive vehicles. These will be in two basic vehicle lines: (1) Omni/Horizon and (2) "K-car" and its derivatives—i.e., "stretched" variations to replace Le Baron and Diplomat and modifications to produce front-wheel drive vans and trucks.[37]

Conclusion

Chrysler should have the capability to achieve plant-specific scale economies with very efficient assembly plants if the "K-cars" are successful in the market. Furthermore, the closing and consolidation of engine and parts plants indicate Chrysler is attempting to improve the rates of output in these plants to take advantage of scale economies.

However, efficient rates of output are only part of the story. Because Chrysler does not have the total volume of output that General Motors and Ford have, it is not able to move as far along a downward sloping unit cost curve as those firms. This is a particularly critical problem in auto body production where evidence suggests M.O.S. is achieved at only very large volumes of output if at all.

Even if Chrysler would re-attain 15 or 16 percent of the market (which would be a remarkable achievement if done in the short-run), it is unlikely it would exhaust all of its potential scale economies. It must find those market segments where its products can be produced with long product runs. Therefore, the Omni/Horizon and "K-car" derivatives will have to meet public acceptance without major redesign for several years to enable Chrysler to recover its costs of tooling.

It is unlikely that Chrysler will be in a position to redesign its products as frequently as its larger competitors. It must, of course, obtain enough consumer acceptance to sustain high rates of output on an annual basis to take advantage of plant-specific scale economies. But, it must also plan to produce basically the same models over a long period of time to generate sufficient volume to obtain product-specific scale economies.

If Chrysler is successful in this strategy it should remain a viable motor vehicle producer. Then Chrysler's remaining Ohio plants probably would continue in operation as part of the Chrysler Corporation. The Toledo, Twinsburg, Sandusky, and Van Wert plants are all modern enough to be essential to Chrysler as an on-going firm. The Dayton plant has been modernized recently and is Chrysler's only source of heaters and air conditioners. The Lima plant is essential to the national defense effort.

All of the plants might survive as parts of other firms in the event of a Chrysler shutdown. The optimal solution, though, would be to keep them operating as part of a viable Chrysler Corporation. Such operations would avoid potentially disruptive short-term social and economic adjustments in those regions of the state that have Chrysler facilities.

NOTES

[1] U.S. Congress, House, Subcommittee on Economic Stabilization of the Committee on Banking, Finance, and Urban Affairs, *Findings of the Chrysler Corporation Loan Guarantee Board*, 96th Congress, 2d. Session, Committee Print 96-13, May 12, 1980.

[2] Andy Pasztor, "U.S. Clears Chrysler Aid," *Wall Street Journal*, June 25, 1980, p. 2.

[3] Subcommittee on Economic Stabilization, p. 134.

[4] "Chrysler to Shut Fostoria Foundry in April, 1980," *Automotive News*, February 25, 1980, p. 4.

[5] *Ibid.*, p. 135.

[6] *Ibid*, pp. 678, 716, 775, 683.

[7] *Ibid.*, pp. 679, 693, 778.

[8] *Ibid.*, pp. 728, 734.

[9] *Ibid.*, pp. 719, 744.

[10] *Chrysler Corporation, 1978 Annual Report* (Detroit: Chrysler Corporation, 1979), p. 8.

[11] Subcommittee on Economic Stabilization, pp. 681, 713, 771, 782.

[12] F. M. Scherer, "Economics of Scale and Industrial Concentration," in Harvey L. Goldschmid, H. Michael Mann, and J. Fred Weston, Eds., *Industrial Concentration, The New Learning* (Boston: Little, Brown, and Co., 1974), pp. 19-20.

[13] *Ibid.*, pp. 33-34. For a more complete discussion on the distinction between plant-specific and product-specific scale economies, see F. M. Scherer, Alan Beckenstein, Erich Kaufer, and R. Dennis Murphy, *The Economics of Multi-Plant Operation* (Cambridge, Mass.: Harvard University Press, 1975), pp. 49-56.

[14] Scale economies in truck production are not as easy to deal with. Truck sizes are not as homogeneous as automobiles and come in eight distinct Gross Vehicle Weight classes from light to heavy duty trucks. The conditions and means of producing trucks in the different classes are quite diverse ranging from mass produced light pickup trucks to custom built heavy duty units. The unique characteristics of scale economies in heavy truck production are being explored by the author in other research currently in process.

[15] Joe S. Bain, *Barriers in New Competition* (Cambridge, Mass.: Harvard University Press, 1956), p. 306.

[16] See Lawrence J. White, *The Automobile Industry Since 1945* (Cambridge Mass.: Harvard University Press, 1971), pp. 38-53, and D. G. Rhys, *The Motor Industry, An Economic Survey* (London: Butterworths, 1972, p. 283.

[17] Rhys, *The Motor Industry*, p. 283.

[18] Bain, *Barriers to New Competition*, pp. 244-45.

[19] White, *The Automobile Industry*, pp. 38-53.

[20] *Ibid.*, p. 53.

[21] Rhys, *The Motor Industry*, pp. 262-289.

[22] John S. McGee, "Economies of Scale in Auto Body Manufacture," *Journal of Law and Economics*, XVI (October 1973), pp. 239-273.

[23] *Ibid.*, p. 249-250.

[24] *Ibid.*, p. 273.

[25] Jack A. Menge, "Style Change Costs as a Market Weapon," *Quarterly Journal of Economics*, LXXVI (November 1962), pp. 632-647.

[26] "Chrysler Hamtramck Plant Closes Permanently June 4," *Automotive News*, December 17, 1979, p. 8.

[27] "Superplant," *Dodge Adventurer Magazine*, Fall 1978, pp. 29-30.

[28] "Chrysler Plant Closing in July Will Spell End to Firm's Role as Maker of Big Cars," *Wall Street Journal*, May 19, 1980, p. 4.

[29] "Chrysler Decides to Make Full-Size Autos at Least to Year End in Strategy Change," *Wall Street Journal*, June 4, 1980, p. 2, and Marjorie Sorge, "Dealers Saved Lynch Road, U.A.W. Reveals," *Automotive News*, June 30, 1980, p. 7.

[30] "Chrysler Announces Permanent Closings for Truck Facility and V8 Engine Plant," *Wall Street Journal*, May 13, 1980, p. 12.

[31] *Ibid.*

[32] Marjorie Sorge, "Chrysler Seals Big-Car Doom," *Automotive News*, May 19, 1980, p. 1.

[33] Roger Rowand, "Chrysler Keeps '81's on Target," *Automotive News*, May 26, 1980, p. 10.

[34] Jenny L. King, "Jefferson—A Brand New Old Plant," and "Newark Overhauled for K-car Output," *Automotive News*, July 7, 1980, pp. 28 and 30.

[35] "GM May Build New Buick Plant," *Automotive News*, June 30, 1980, p. 1.

[36] Subcommittee on Economic Stabilization, pp. 213-275.

[37] Andy Pasztor, "Chrysler Is Speeding Up Development of Fuel-Efficient Models Despite Risks," *Wall Street Journal*, July 3, 1980, p. 3.

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